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ABSTRACT

The document studies the availability and use of manpower data in vocational education and delineates the underlying factors influencing data usage. Information was collected from 10 States selected from 10 Federal regions. Descriptions of the findings are presented for each agency according to the following categories: (1) State vocational education agencies; (2) local vocational education agencies; (3) State and local employment security agencies; and (4) regional offices of the United States Office of Education, Bureau of Labor Statistics, and Manpower Administration. Exemplary practices at the State and local levels are listed and include organizational relationships between employment service and vocational education agencies, special services provided by employment security agencies, and innovative uses of manpower data by vocational educators. Factors influencing the availability and use of manpower data are identified: student demand, personal knowledge, local autonomy, agency isolation, and revenue-sharing. Recommendations for improving the availability and use of manpower data are presented for the Congress, Commissioner of Education, Commissioner of Labor Statistics,, and Assistant Secretary of Labor for Manpower. References are included. Appended materials include the methodology, the occupational employment statistics program, and a copy of the Interagency Agreement for the Development of Occupational Manpower Information. (Author/EC)

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MANPOWER DATA AND VOCATIONAL EDUCATION: A NATIONAL STUDY OF AVAILABILITY AND USE

D. W. Drewes
Douglas S. Katz

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DWD
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EXECUTIVE SUMMARY

The lack of effective usage of manpower data has been consistently identified as an area of difficulty by those both within and outside the vocational education community. This study, funded by the National Institute of Education, documents the availability and use of manpower data in vocational education, delineates the underlying factors influencing data usage, and provides recommendations to facilitate data availability and use.

Each of the ten federal regions was included in the study, and interviews were conducted with regional, state and local personnel in both data-producing and vocational education agencies. The ten states visited spent approximately 34 percent of the Vocational Education Act funds expended during fiscal year 1973 and accounted for approximately 37 percent of the vocational education enrollments in the United States.

Descriptive reports of the findings are presented by agency classification in Chapters II, III, IV and V. Chapter VI lists 50 exemplary practices observed at the state and local levels. Chapter VII discusses five major factors which influence the availability and use of manpower data. Chapter VIII presents recommendations for improving the availability and use of manpower data. Some of the major findings are presented below, followed by a list of recommendations.

- The state plan for vocational education is not regarded as a viable management document in many states.
- None of the ten states requires the local educational agencies to use specific data sources to determine local manpower needs.
- All ten states encourage the local educational agencies to conduct their own assessment of manpower needs.
- The decision to alter ongoing vocational education programs is generally regarded as a local prerogative.
- Systematic program monitoring and evaluation appear to be minimal in the majority of states visited.
- Local autonomy prevents many state vocational education agencies from maintaining a leadership role.
- There is a tendency for both state and local vocational education agency staff to distrust published manpower data.

- Local vocational education personnel consider information from advisory committees and locally conducted surveys to be more useful than published manpower data for determining local manpower needs.

- Once a vocational education program is installed, manpower projections play a minor role in future programmatic decisions.

- Program contraction or termination is more likely to result from lack of student interest than a lack of available jobs for program completers.

- Many schools have no formal procedures for collecting placement or follow-up information.

- Local program terminations are seldom initiated by the state vocational education agency.

- Many local vocational education planners are unaware of the existing published manpower data available from employment security, BLS and other governmental agencies.

- The statistical orientation of most employment security and BLS manpower projections inhibits their use.

- Many local vocational education administrators feel they have neither the time nor technical skills to do an adequate job of reviewing manpower data and incorporating it into their plans.

- Few state employment security agencies are financially able to provide special data compilations in response to specific requests from vocational education program planners.

- State vocational education agencies rarely reimburse state employment security agencies for special services provided them.

- Employment security services provided to state vocational education agencies and local schools are being curtailed because of budgetary cuts. A wide variety of services are no longer being provided.

- Local employment security offices receive few requests from educators for manpower data.

- School placement services are seen as duplicating, even competing with, the placement function performed by employment security local offices.

- Decisions concerning the quality and quantity of vocational education programs are considered by USOE personnel to be state and local concerns: the autonomy of the states is respected.

- Manpower data contained in state plans for vocational education are not verified for accuracy by regional USOE Personnel.

- USOE regional personnel do not generally acquire and analyze manpower data for use in state plan review.

- No categorical funds are made available to BLS to prepare special data tabulations for use by vocational educators.

- BLS regional offices have few if any formal arrangements for communicating with educators.

- USOE has not provided the Department of Labor with any federal funds authorized in the Vocational Education Amendments of 1968 for the provision of data-related services.

Recommendations for consideration by the Congress:

- Authorization in the Vocational Education Act of 1975 for the development and use of a nationally uniform vocational education data system.

- Legislative requirements that all public, proprietary and home study schools receiving federal support report program completions by appropriate education course codes.

- Authorization in the Vocational Education Act of 1975 for the annual transfer of an amount not less than $5,000,000 to the Secretary of Labor to finance the development of a comprehensive system of labor market information on a national, state, local or other appropriate basis for public use and for the use and guidance of federal, state and local officials and of advisory councils charged with responsibility under this Act.

- Establishment of a Manpower Information Coordinating Committee consisting of the Commissioner of Education, the Commissioner of Labor Statistics and the Assistant Secretary of Labor for Manpower, and empowerment of the Committee with administrative authority over the utilization of funds transferred to the Secretary of Labor.

- Authorization of funding in the Vocational Education Act of 1975 for a Manpower Information Coordinator to be employed by each state vocational education board.

- A legislative requirement in the Vocational Education Act of 1975 that the state vocational education board shall not provide financial assistance under the Act to any local education agency unless such agency has participated in the development of a comprehensive program plan for an educational planning region. An educational planning region for purposes of the Act may be a geo-political unit or combination of geo-political units which has a combined population of 100,000 or more persons on the basis of the most satisfactory current data available to the Commissioner of Education.

Recommendations for consideration by the Commissioner of Education:

- Identify exemplary practices in the projection of vocational program enrollments, early leavers, and program completers; disseminate these practices to state and local agencies: and provide technical assistance in implementing projection procedures.

- Work cooperatively with the Director of the Census in planning the format of the 1980 Census of Population Subject Report: Vocational Training.

- Until such time as program statistics are routinely available from private institutions, make available to all state vocational agencies a directory of the known universe of proprietary vocational schools and provide guidelines and technical assistance in designing sample surveys to estimate number of annual program graduates.

- Work cooperatively with the Commissioner of Labor Statistics and the Assistant Secretary for Manpower to develop training packages to assist local vocational educators in the uses of manpower data in program planning.

- Establish standardized data element definitions and require their use by the states in complying with USOE reporting requirements.

- Establish standardized student follow-up procedures to be used by the states.

- Establish and disseminate to the states a standardized program-to-occupation crosswalk and require its use in state plan preparation.

- Establish further contact with national employer organizations to explore development of training guidelines for involvement and functioning of employers in local vocational education advisory groups.

- Require that Table 1 in the state plans for vocational education classify vocational programs by six-digit OE codes.

- Re-examine the allocation formulas being used by the states to disburse Vocational Education Act of 1968, Part B, funds to local education agencies.

- Provide the regional offices with additional staff and resources to provide technical assistance to state educational personnel on the availability and use of manpower data.

- Work cooperatively with the Commissioner of Labor Statistics and the Assistant Secretary of Labor for Manpower to develop occupational clusters for use in program planning, curriculum development, and facilities planning.

Recommendations for consideration by the Commissioner of Labor Statistics:

- Increase the Bureau's emphasis on the provision of labor statistics for local labor markets.

- Develop technical and computer procedures to allow state ES agencies to develop sub-state area industry-occupation matrices with annual update capabilities.

- Provide for annual modification of the projected national matrix for a five-year forward projection.

- Establish standardized techniques for the projection of employment by industry groupings.

- Develop non-technical explanations of DOL labor market concepts and methodologies for disseminating to educators and other client groups.

- Work cooperatively with the Commissioner of Education to develop guidelines for the use of labor market information.

- Provide more labor market information in a narrative format.

- Work cooperatively with the Commissioner of Education to develop occupational clusters.

- Organize the coverage of the Occupational Outlook Handbook around the empirically derived clusters.

Recommendations for consideration by the Assistant Secretary of Labor for Manpower:

- Expand the client constituency of the OES Program.

- Direct state employment security agencies to publish occupational projections on an annual basis.

- Improve the dissemination of manpower information to client groups.

- Work cooperatively with the Commissioner of Education to establish joint policies to promote coordination of placement efforts and the increased utilization of employment security job services.

- Work cooperatively with the Commissioner of Education to develop occupational clusters.

- Energize a program calculated to enhance the image of ES agencies with respect to the public schools and other public services agencies.

- In cooperation with the Commissioner of Education and the Director of the National Institute of Education, design, develop, field test and implement in local employment security offices a comprehensive occupational information system for individual clients.

- Allocate an annual amount not less than the annual amount transferred under the authority of the Vocational Education Act of 1975 for the purposes of developing a comprhensive occupational and labor market information system on a national, state, local or other appropriate basis.

- Extend the coverage of the OES survey to all states.

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CHAPTER I

INTRODUCTION

The intent of the Vocational Education Amendments of 1968 is that state and local planning of vocational education programs include consideration of manpower needs and job opportunities at the local, state and national levels. The Declaration of Purpose in the 1968 Amendments to the Vocational Education Act of 1963 (PL 90-576) declares that the grants to the states are to assist them in providing vocational training ". . . which is realistic in light of actual or anticipated opportunities for gainful employment . . ." (PL 90-576, Sec. 101). To facilitate the availability of appropriate manpower data, Section 103 of PL 90-576 authorizes the Commissioner of Education to transfer up to $5,000,000 per year to the Secretary of Labor to finance ". . . national, regional, State and local studies and projections of manpower needs for the use and guidance of Federal, State and local officials . . ."

The transfer of VEA funds to the Department of Labor has yet to take place. The FY 1970 budget request of HEW included the $5 million authorized under the 1968 Amendments. However, the Bureau of the Budget reduced this amount to $2 million. In June of 1971 a letter from the Assistant Secretary for Manpower informed the Commissioner of Education that:

> On the expectation that such funds would be made available, instructions were sent to the State employment security agencies in order to carry out a program of this magnitude. Unfortunately, the entire $2 million requested for FY 1970 was subsequently denied by Congress and no request was made by HEW for FY 1971 funds under this provision of the law. In the absence of any resources necessary to provide the occupational requirements information, we had no alternative but to make the development and reporting of this information by the State agencies voluntary rather than required.

To better enable state and local vocational education agencies to develop their own manpower data, the Office of Education designated that area as one of the priority areas for FY 1974 research projects funded under Part C of the 1968 Amendments: "Applied studies will be supported to improve manpower, job, labor market, and demographic information relevant to the needs of Federal, State and local educational administrators, planners, evaluators, and other user groups." In the following year, priorities for FY 1975 Part C research projects included the design and development of more comprehensive management information systems which would improve "the administrative capability to utilize student supply, manpower demand, cost analysis, student placement and follow-up services and evaluation information . . ." These research priorities reflected USOE's increasing concern for improving the information available to state and local vocational education personnel.

Historical Perspective

Concern over the availability and use of data for vocational education planning and evaluation has been frequently expressed during the past decade. In 1968 the report of the Advisory Council on Vocational Education stated that "there is little evidence of much effort to develop programs in [occupational] areas where critical manpower shortages exist" (1, p. 18). Similarly, a 1971 study by Lecht of the use of manpower data by local vocational education agencies revealed that "Only one of the six sites visited was preparing plans with detailed demographic and manpower information which linked educational program planning to specific quantitative objectives describing job availability and students to be served" (2, p. 5). In 1972, a study sponsored by the National Advisory Committee on Vocational Education (3) resulted in the following findings:

> The insufficiency of State and local occupational projections and the lack of knowledge of mobility patterns are very serious deficiencies for planning vocational education curricula (p. 4).
>
> There is almost no information on the input to the supply of workers from sources other than vocational education (p. 6).
>
> . . . producers of information often did not disseminate their products widely enough so that involved organizations were not always aware of the latest materials which could be useful to them (p. 7).
>
> Although planners were involved in relating manpower data to planning, in many instances there was a lack of expertise in understanding and using the data (p. 7).

More recently, the General Accounting Office issued a report on selected aspects of secondary and postsecondary vocational education in seven states visited during the 1973-74 school year.(4) One of the areas they investigated was the use of manpower data in program planning and evaluation. They reported:

> State educational officials told us that available projections of labor demand and supply were unreliable and were included in the State plans only to comply with OE requirements (p. 73).
>
> At the local level secondary and postsecondary schools placed little reliance on manpower projections in developing and reviewing vocational offerings (p. 73).
>
> Although both quantity and quality of manpower data have improved in recent years, vocational educators told us manpower data were not used in a systematic manner because they considered them inadequate (p. 74).

While each of the reports cited above has highlighted some of the problems relating to the use of manpower data in vocational education,

they have not delineated in a systematic manner the underlying factors influencing the use or non-use of manpower data. Certainly, some of the constraints appear to be directly related to the existing data, but individual, organizational and contextual variables may play an even more important role in determining data utilization. Thus, the use of manpower data in vocational education planning must be considered not only in relation to both the availability and adequacy of the data per se, but also with respect to the total system wherein manpower data are produced and consumed.

The Manpower Data System

Much of the published manpower data used in vocational education planning is either directly or indirectly produced by the Department of Labor. At the national and regional levels the agencies involved in the production of data are the Manpower Administration (MA) and the Bureau of Labor Statistics (BLS), and at the state level, the state employment security (ES) agency. Within each state there are numerous local employment security offices which provide direct services to clients and collect data which are later processed by the state ES and forwarded to the Manpower Administration and/or the Bureau of Labor Statistics.

State and local ES offices are funded by the Manpower Administration and are a part of the administrative responsibility of the ten regional offices of the Manpower Administration. Because of this arrangement, the services provided to vocational education by ES offices--including manpower data--are largely under the control of the Manpower Administration. The Manpower Administration can require state employment service agencies to prepare special publications for vocational education, or they can allow each state ES to decide for itself the extent to which it will provide special services to vocational education.

There are eight BLS regional offices that cover the ten federal regions. BLS regional offices function in a technical capacity to state ES agencies. They also produce a variety of publications containing manpower and economic data and disseminate publications produced by BLS in Washington, D. C. Most BLS publications are national or regional in geographic coverage. Each regional office produces occasional publications for smaller areas.

The U. S. Office of Education has a regional office in each of the ten federal regions. Among its responsibilities, the division of Occupational and Adult Education in each of the OE regional offices is responsible for reviewing state plans received from the states in their respective regions. They also provide considerable assistance to the states to ensure that VEA funds are disbursed in accordance with the law and federal regulations.

Each state has designated a state board as the sole agency to be responsible for the allocation and administration of VEA funds. This agency must prepare an annual state plan for vocational education which

describes, among other things, how federal and state funds will be spent on vocational education at both the secondary and postsecondary levels throughout the state. The plan must also show how the state's vocational program offerings are preparing students for employment or for admission to technical education at a higher level. To show such needs, Table 1 of the state plan must present manpower data in relation to vocational program offerings.

Since vocational programs are offered primarily at the local level, each local vocational education agency, to receive federal funds, must also prepare and submit for approval a local plan for vocational education to the state vocational education agency. Like the state plan submitted to USOE, local plans are supposed to reflect consideration of local manpower needs.

Figure 1 schematically represents the major producers and users of manpower data of concern to the present study. On the data-producing side, there are the regional Manpower Administration offices, the regional BLS offices, the state ES agency and local ES offices. On the data-using side, there are the regional USOE offices, the state vocational education agencies and local vocational education agencies. While vocational education agencies also produce some manpower data, they are classified as users of data for the purposes of this study.

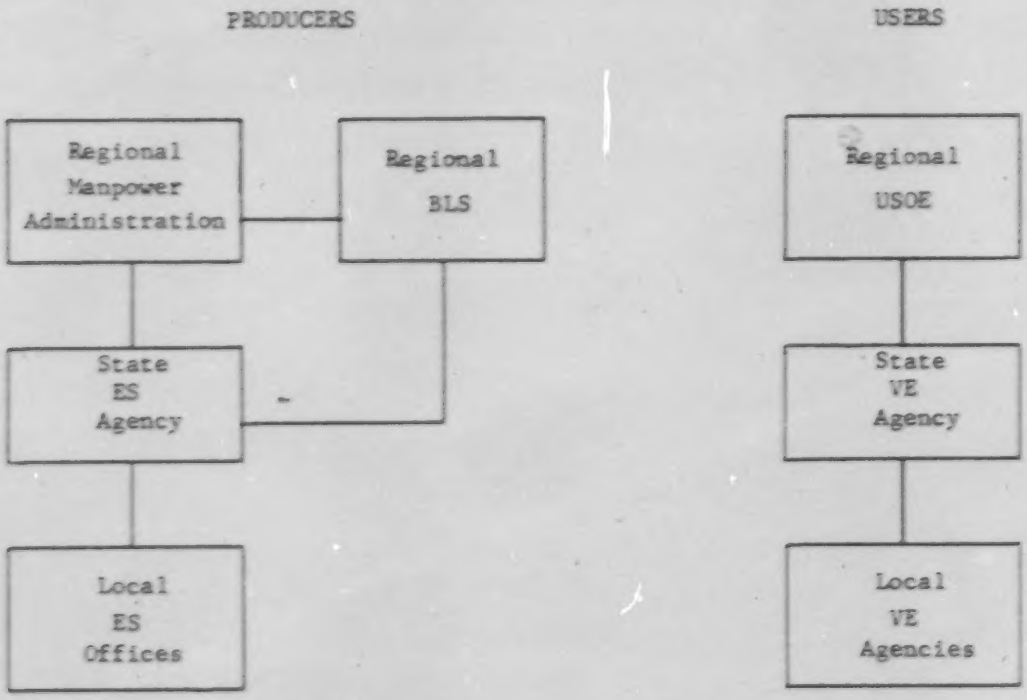

Figure 1. The Manpower Data System of Concern to This Study

Design of the Study

The ten federal regions served as the sampling frame for the study. In each region the Manpower Administration, BLS and USOE regional offices were visited.

Within each of the ten regions a state was selected for visitation. The states were selected jointly by the regional offices of the U. S. Office of Education, the Manpower Administration and the Bureau of Labor Statistics. For each of the ten regions the regional agency directors were asked to identify exemplary states within their region with respect to the use of manpower data in vocational education program planning and operations. Each regional director was asked to identify the top three states in his region. Consensus was ultimately achieved in all ten regions with regard to which state should be visited.

In each of the selected states, the state agencies responsible for secondary and postsecondary vocational education were visited, as were two secondary and two postsecondary local vocational education agencies. Likewise, the state employment service agency in each state was visited. Local employment service offices were selected for visitation on the basis of their proximity to the preselected local vocational education agencies, which in most cases resulted in four local employment security offices per state. In addition to the vocational education and employment service agencies visited within each state, interviews were also conducted with the executive director of the State Advisory Council on Vocational Education and the executive director of the State Manpower Services Council.

Individually structured interviews were conducted with approximately 300 people during the course of the project, with most interviews requiring from two to three hours. (For a more detailed description of the methodology, the reader is referred to Appendix A.)

Presentation of Results

Descriptions of the findings are presented for each agency. These findings are based in part on the personal beliefs and opinions of respondents and do not necessarily reflect factual authenticity or official agency position. Chapter II focuses on state vocational education agencies; Chapter III on local vocational education agencies; Chapter IV on state and local employment service agencies; and Chapter V on the regional offices of USOE, BLS and Manpower Administration.

Chapter VI contains a listing of what we consider to be exemplary practices at the state and local levels. These practices include organizational relationships between employment service and vocational education agencies, special services provided by ES, and innovative uses of manpower data by vocational educators.

Chapter VII focuses on the major underlying factors influencing the availability and use of manpower data by vocational educators at the state and local levels. Chapter VIII presents recommendations for improving the availability and use of manpower data.

CHAPTER II

MANPOWER DATA AND STATE VOCATIONAL EDUCATION AGENCIES

Summary Observations

- The state plan for vocational education is not regarded as a viable management document in many states.
- The linkages between instructional programs and occupations are not made explicit in most state plans.
- State agency staff tend to be more familiar with ES publications than with BLS manpower publications.
- No state included in the study requires the locals to use state-specified data sources to determine local manpower needs.
- The most frequent use of manpower data in planning is in the preparation of the state plan.
- The most frequent use of manpower data in operations is in the approval of applications for new program starts.
- All ten states encourage the local educational agencies to conduct their own assessment of manpower needs.
- The decision to alter an ongoing program is generally regarded as a local prerogative.
- Systematic program monitoring and evaluation appear to be minimal in the majority of states visited.
- There is a tendency for state agency staff to distrust published manpower projections.
- Local autonomy prevents many state agencies from maintaining a leadership role.

Program Planning

Planning Structure

Primary responsibility for state-wide planning of federally supported vocational education is vested in a state board. Six of the states visited have separately constituted boards of vocational education responsible for the administration of federal-state cooperatively funded programs. These boards vary in the extent of overlapping membership. In three states, a specified number of board members must be drawn from the state board of education and/or the state board of higher education. In the other three states, the membership of the vocational board is coterminous with the state board of education. Responsibility for postsecondary-level vocational education is shared by two boards in six of the states visited. In three of the six states, the state board of education or vocational education and the state board of community colleges are co-responsible for postsecondary vocational programs. In the other states, responsibility is shared between the state board of education or vocational education and the state board of higher education. The effect is that postsecondary vocational education in these states is administered by both secondary and postsecondary delivery systems, each with potentially different philosophies and policies and each protective of their respective jurisdictional domain.

Overlapping membership on state boards

Dual postsecondary systems

States have dealt with the problem of duality in a variety of ways. One state has formed a council to coordinate secondary and postsecondary delivery systems and has given the council authority for the management of all federal vocational funds. Another state has a joint committee of board of education and community college members whose purpose is to coordinate the total state-wide programs of federally aided vocational education by providing advice with regard to policies, procedures, fund allocations, staffing responsibilities, planning and program development. Three states have cooperative agreements between the state boards of vocational education and the state boards of higher education or community colleges with regard to program administration, funding of programs, procedures for approval of vocational education programs and arrangements for division of federal funds. The boards in several states, however, appear to function in relative isolation and indifference with little evidence of formal communication.

The Vocational Education Amendments of 1968 (PL 90-576) prescribe that a state must designate a board as a "sole agency" for the purposes of the Act. Three states have designated the board of education as the sole agency, six states have designated vocational boards and one state has a single board which

Vocational education identified with secondary education

is responsible for all education in the state. Three of the six vocational boards are coterminous with the state board of education. Since state boards of education are generally charged with the general control and supervision of the public secondary school system, the effect has been to identify vocational education with secondary education.

Examination of the organizational structure of state agencies for vocational education tends to support this observation. State directors in seven states report directly to vocational boards. One state director is four administrative levels removed from the state board, one is three levels removed, four directors are two levels removed and one state director is one level removed. The organizational location of vocational education serves to strengthen the identification with secondary education in that it tends to inhibit formal communication with educational institutions under separate board jurisdiction. Thus, it appears that state-level vocational education agencies in the majority of the states visited (1) are neither organizationally separate from nor equal to general education; (2) had little direct control over vocational programs funded under Part B postsecondary set-aside of PL 90-756 and administered by community/junior colleges under separate board structure.

Description of the Planning Process

The planning process in many of the states visited is primarily geared to the production of a state plan as required by PL 90-576. Generally, the process begins with the identification of state goals and objectives. Local initiative in the formulation of these goals and objectives varies considerably. In six states, goals and objectives tend to be initiated at the state level. Several of these states derive their goals from a deductive analysis of federal and state legislation, policies and regulations. Others depend upon internal agency personnel to generate goals and objectives based on their assessment of state needs. Some states attempt to involve large segments of the population in the process, while others seek legimitization from a limited number of local personnel. One state has legislatively created area vocational committees of lay citizens mandated with the responsibility of making recommendations for "short-term improvement" of vocational education. In those states with strong local initiative, state goals and objectives are largely a compilation and distillation of input from local educational agencies.

State-level initiative varies

An examination of state plans showed that the states' objectives tend to be either primarily process-centered or service-centered. Process-centered objectives are those concerned with agency-centered facilitative and coordinative

Objectives tend to be either process- or service-centered

activities, e.g., provide leadership training, organize in-service training programs, develop guidelines. Service-centered objectives are concerned with increasing the availability and utilization of vocational services, e.g., increasing guidance and placement services, increase number of vocational teachers able to serve disadvantaged, increase enrollments. Of the state plans analyzed, four states tended to be process-oriented. Their objectives were more qualitatively stated, more global in scope and less amenable to evaluation. Of the six states classified as having service-centered objectives, only one stated the objectives in absolute amounts, e.g., enroll 300 handicapped students, increase enrollments by five percent.

State plan seen as a compliance document

Despite the legislative intent, the state plan in most states is not widely regarded as a viable management document. State agency personnel in three of the states indicated that they considered their state plan to be a compliance document rather than a plan indicative of their anticipated operations. One state noted that there was little match between the state plan prepared for federal compliance and the management plan prepared for the state superintendent. Agency personnel in one state told us that the state plan is "just an exercise in getting federal funds." Goals and objectives contained in Part II of the state plan in another state were seen as not intended to be legally binding upon the state; however, efforts were underway to make their state plan a prescriptive rather than a descriptive document.

Sub-state regional offices provide assistance to locals

Five state vocational education agencies have regional offices, each serving a geographical area. The role of the regional offices in the planning process is to provide consultative technical assistance to the locals, to facilitate and coordinate local planning efforts, to disseminate planning information from the state to the local level, and to assess and communicate local interests and needs. Regional personnel interact with locals in their region through personal visits, workshops, and conferences. One state has a hierarchical regional planning structure wherein regional personnel meet with intermediate unit representatives of constituent planning units. Each planning unit in turn covers seven or eight public school districts. Three states require, or are in the process of requiring, that locals participate in the preparation of a regional plan for vocational education. The regional plan, in effect, is a mini-state plan for cooperative area-wide vocational education.

Funding Process

Five states use block grant formulas; five award competitive grants

Vocational education is funded from federal, state and local funds. For the states contacted in this study, the percentage of federal funds expended in FY 1973 ranged from 8.7

to 24.9 with a median of 12.9. Five states distribute Part B, VEA, funds to local education agencies by block grant formula allocation, and five states allocate vocational funds by competitive grant award.

Block grants function as entitlements. If the locals are interested in obtaining their entitlements, they must submit an application to their state vocational education agency for funding approval. Block grant entitlements in one state are a function of district and state total and vocational enrollments. In another district, entitlement is dependent upon the district portion of the state's unmet student needs. One state has a minimum foundation grant supplemented by a variable discretionary allocation which is dependent upon subjective appraisals of manpower needs, vocational educational needs, relative ability to pay, and excess costs.

The most sophisticated allocation formula encountered consists of nine separate formulas, each for such specific purposes as disadvantaged, handicapped and general adult. The formulas contain variables that can be objectively measured. As an example, district allocations for general secondary purposes are a function of secondary school enrollment, market evaluation per school enrollee, effective buying income per household of the county in which the school district is located, high school dropout rate in the county, expenditure per pupil in vocational education, extent of economic depresssion in an area, projected county training needs and expenditure per pupil in the district for all students. This state also is the only state that statistically transforms the variables so as to control their weightings.

Only one state formula based entirely on objective measures

Competitive grants are awarded on the basis of relative priorities. Local applications are assigned a rating based on judgments that ostensibly take into consideration the factors of manpower needs, vocational education needs, relative ability to pay, and excess cost as required in Sec. 123(6) of PL 90-576. Applications are prioritized on the basis of a weighted function of their ranking on these and other considerations such as location in economically depressed areas. Ratings scales are frequently used to determine the degree to which local applications meet the established criteria. However, the means by which, for example, objective manpower information from area skill surveys, manpower and labor force reports, special studies and advisory committee reports are translated into a judgment that "employment needs are severe or great" are obscure.

Two states require as a prerequisite to funding that local districts must have participated in the preparation of a regional five-year plan for vocational education. Local applications are required to show how the proposed programs, services

Two states require regional plans

and activities will contribute to regional objectives in terms of populations needing vocational education service and present and projected manpower needs. These same two states are also the only states to require that local applications indicate the extent to which the proposed programs, services and activities are compatible with the state-wide goals and objectives as contained in Part II of the state plan.

Diverse restrictions on uses of federal funds

The majority of states allocate federal funds for the support of both new and continuing programs. Two state agencies indicated that they use federal funds primarily for the support of new programs. Two states preclude federal funds from being used for the general support or maintenance of existing programs. Programs in one of these states are supported from federal funds for a maximum of three years. In contrast, programs in another state visited, once approved, receive continued funding according to a special purpose flat grant funding formula. Several states restrict reimbursement of approved programs. One state reimburses secondary locals for institutional salaries only, while another reimburses locals for instructional salaries, equipment and professional travel.

State funds usually allocated on a per pupil basis

State funds are distributed to locals on a per pupil unit apportionment and/or as a reimbursement for incurred costs. Eight states allocate state funds by a per pupil unit formula with an adjustment to reflect the added cost of vocational education programs. The remaining states provide variable levels of reimbursement depending upon the objects of expenditure. The most liberal reimbursement schedule is 50 percent of the net maintenance sum of approved vocational programs, making it cheaper for schools to operate vocational programs than regular academic programs. This schedule, however, is biased against those locals who have less ability to support vocational programs from local funds.

Uses of Manpower Data in Program Planning

Planning regarded as a support function

In the states contacted, planning is generally regarded as a support function. The major activities included under the planning function are state plan preparation; acquisition, interpretation and dissemination of manpower data; coordination of information systems; and compilation of fiscal and statistical reports. Uses of manpower data in each of these major activities will be subsequently discussed. Fiscal and statistical reporting will be omitted as these activities involve little direct use of manpower data.

State Plan Preparation

Federal regulations require that state plans report current employment and estimated demand and supply information by instructional programs. Eight states reportedly use estimates of current employment provided by state employment security agencies. Six state plans report estimates of projected job demand due to growth and replacement needs obtained from employment security agencies' application of the National/State Industry-Occupational Matrix System methodology, which is operational in all states. Two states obtain projected growth and replacement estimates as output from vocational education management information systems; these estimates are based on data received from the state ES. Two state agencies report projected estimates obtained from non-governmental sources. Supply estimates in all of the state plans analyzed are restricted to outputs from public and private vocational education agencies and public manpower agencies. Supply from public vocational education sources is generally construed as the total number of vocational education program completers. Only one state reportedly refines the concept of supply to include only those vocational program completers who are employed plus those seeking work in that occupation. Supply from other than vocational program sources generally includes program completers from private schools and manpower programs. Data on private school completions are obtained from regular reports from private schools if available or from prior surveys. Information on manpower training program outputs is usually obtained from state employment security agency records. One state obtains data on apprenticeship and on-the-job training (OJT) program outputs from surveys conducted by the Equal Employment Opportunity Commission as required by Sec. 709(c), Title IV, of the Civil Rights Act.

Variety of sources of supply and demand data

Considerable variation exists in the specificity of the OE instructional codes used to report demand and supply data. Four states report demand and supply data by two-digit OE codes, two states report by four-digit OE codes and four states report by six-digit OE codes. The effect is that four states report demand and supply data by seven global instruction program categories. The number of program instructional categories used by the remaining six states ranges from approximately 40 to 280. The median number of instructional program categories for which demand and supply data are supplied is 55.

From 7 to 280 program categories reported

Only two states provide explicit information in their state plan on the linkage between vocational education instructional programs and occupations. In those states, demand data are provided for each of the occupations associated with a particular vocational program. In one state, programs and occupations are clustered and occupational clusters and program clusters matched on a one-to-one basis. Demand data are

Programs-to-occupations linkages usually not explicit

provided for each occupation in the occupational cluster. Supply data are provided for each instructional program in the program cluster. In the other state, demand data are provided for each occupation associated with a specific instructional program.

Personal judgments used to match programs to occupations

For those states that do not provide such information, we can only speculate about the process used to associate demand estimates with vocational programs. A vocational planner in one state, in response to the question of how he made the decision, indicated that in the absence of any formal criterion, he simply went down the list of occupation projections provided by employment security and matched occupations and programs according to his best judgment. Another characterized the match between DOT codes and OE program codes as "a cumbersome and tiresome process."

ES usual source of unemployment data

In addition to demand and supply data, states are required by federal regulations to provide data on areas of high unemployment and to designate areas identified as economically depressed. Seven states provide area data on unemployment obtained from state employment security agencies. Of the remainder, one state uses unemployment data supplied by the state manpower council, another uses data from Area Trends in Employment and Unemployment, and one uses national data on unemployment rates referenced from the U. S. Department of Labor's Manpower Report of the President. Only four states provide data in their state plan on areas of high youth unemployment. In all cases, these data are provided by state ES agencies. Data on economically depressed areas are based on ES agency's classification in three states, on U. S. Department of Commerce classification in two states, on state agency classification in two states and according to designated entitlement as determined under Public Works and Economic Development Act in three states.

Usage of additional manpower data in the state plan varies considerably according to state preference. Some states include data such as labor force characteristics, number of persons below poverty level, employment time series data, consumer price index and per capita income. Two states include information on the employment outlook for specific occupations patterned after the format used in the Occupational Outlook Handbook.

Acquisition, Interpretation and Dissemination of Manpower Data

Occupational growth and replacement data cited as most useful

By far the most useful manpower demand data cited are annual and five-year projected growth and replacement data classified by occupations and OE instructional program codes. State vocational agency planning staff personnel in six states

visited receive annual and projected growth and replacement estimates by occupations prepared and distributed by state ES. Planners in two states receive growth and replacement data classified by both occupations and OE codes as output reports from their vocational education management information system. Planning personnel in another state acquire annual average job openings by occupational categories from ES agency reports and projected employment by occupations from in-house reports prepared by Research Coordinating Unit (RCU) personnel. The projection data prepared for the RCU under contract differ in concepts, methodology and coverage, e.g., census data on occupational employment converted from place of residence to place of employment, longer projection period, employment projections based on economic base theory instead of time series regression analyses, trend extrapolations of 1960-1970 state industry-occupation matrices, and coverage extended to include all state labor market areas. Concurrently, the RCU also develops occupational withdrawal rates for the state and major labor market area. One state obtains employment projections from a state economic forecast model. Employment projections are used as input into a vocational education employment enrollment model which projects employment by occupations, vocational educational enrollments, completions and placements. The models, although based on a variety of state and national data, are independent of ES agency-supplied manpower data.

General agreement on relative importance of data categories

Vocational planners are in general agreement on the importance of acquiring state and area current employment by occupations, state and area estimates of total unemployment, projections of manpower demand by occupations and indicators of labor supply by occupation. Moderate importance is attached to state and area current employment estimates, occupation-industry employment matrices, projections of manpower demand by industry, labor force characteristics, manpower enrollments, labor turnover and indicators of general economic conditions. Less concern is expressed for area wage data, listings of job openings and their specifications, listings of job openings that could not be filled locally, characteristics of workers customarily hired and characteristics of typical jobs by occupations.

More familiar with ES than BLS data

In response to a question concerning state vocational agency planning staff familiarity with employment security manpower data, five states can be classified as being very familiar with data available from their state ES agency. Classification is based on the responses of the dominant agency, i.e., that vocational education agency, either secondary or postsecondary, that exhibited the greater awareness and use of manpower data. With regard to manpower data available from Bureau of Labor Statistics, almost all state agencies indicated less familiarity with BLS manpower publications.

State capabilities to deal with the supply side of the manpower equation are much less developed. All states visited have at least minimum capabilities to provide data from student accounting records on the number of completions by OE program codes. Depending upon the sophistication of their student follow-up, some states are able to classify the number of program completers who are available for work by program code. Only five states appear to have systematized procedures for the collection and analysis of supply data in terms of formal training program outputs. One state has a computerized student accounting system that obtains data on the outputs from public secondary programs, public adult and postsecondary programs, private school programs, baccalaureate and diploma RN programs, ongoing federal human development programs, and manpower training programs, as well as data on job seekers from employment security. Another state has a similarly designed system that obtains, in addition, data on the outputs of formal on-the-job training programs and registered apprenticeship programs. Another obtains data from community college programs, private business school programs, associate degree programs in four-year colleges, high school dropouts, and vocational rehabilitation, in addition to secondary public school vocational program completers. Two states have developed models based on longitudinal follow-up data for the projection of vocational program completers and placements. One state reports that the projection model yields ". . . forecasts of the number of public occupational education graduates that could be expected to be available for employment within specific training programs for the years 1976 to 1980." Currently, none of the states visited has the capability to estimate components of supply resulting from in-migration, occupational mobility, those unemployed but currently seeking work, re-entries into the labor force, and the output of private training programs.

Supply data are incomplete

The extent to which manpower data are interpreted for actual use in local decision-making is unclear. Some states are constantly seeking manpower data and are publishing and disseminating them to local educational agencies. Whether the presentation of annual employment and projected job openings accompanied by a description of the methodologies used in deriving the projections and caveats concerning their use contributes to better decision-making is problematical. As one planning administrator put it, "We are at a point in the state now where we more or less have what we want at the state level but presently the data do not appear to have permeated down to the local level where most of the justification of new programs is made." Only one state provided a suggested method for using their MIS information in programmatic decision-making. While many states provide manpower information to the locals on an ad hoc basis, few states provide it on a regular and systematic basis. In most states, assistance in the interpretation of manpower data, if available, is provided on an "as requested" basis.

Local use of state agency data is unclear

Management Information Systems

Seven state agencies have management information systems, but only two have fully operational systems. By management information system, we mean a computerized data processing system that inputs and processes data and systematically produces output reports in a form suitable for use in program planning and operations. Most of the systems either have or expect to have in the near future the capability routinely to provide information on program and curriculum approvals, enrollments, completions, early leavers, student characteristics and enrollment status, student follow-up regarding post-program work and/or educational experience, expenditures, equipment and facilities, and vocational staff personnel.

Most states are developing management information systems

Three of the systems routinely collect and provide data on program completions from private proprietary schools, public postsecondary institutions and federally funded manpower training programs. Information on program completers or early leavers, availability for placement, and employment status in field of training is obtained from student status reports and student follow-up information. In an effort to improve the determination of the occupations for which vocational program leavers may be regarded as supply, one state developed instructional program/occupation matrices of estimated probabilities of employment in a given occupation for leavers from each vocational program. This information together with labor force participation rates and unemployment rates was to have been, along with demand estimates, entered into a demand-supply model. However, plans for the development of this model have subsequently been cancelled.

Manpower demand data not routinely provided by MIS

Only two management information systems routinely provide information on manpower demand. In one state system, information on current and expected job opportunities classified by the state and regions was obtained by survey of employers conducted and periodically updated by the state ES agency. In the other state, both current and projected job openings are obtained for the state, SMSA's and county groupings and subregions by an application of the BLS industry-occupation matrix methodology. Employment projections for each industry sector are obtained by least squares regression using ES-202 county data as the primary base for estimation. Both systems provide demand and supply data classified by OE instructional program code. One system provides current and projected employment as well as anticipated job opportunities by growth and replacement. The other system provides demand and supply and demand minus vocational education supply for clusters of programs and occupations.

MIS usually not located in vocational education agency

The operational location of the management information systems differs across states. Two systems are operated by the state vocational education agency. One is operated by the Research Coordinating Unit, and three are operated by private consulting firms physically removed from the state agency. In one of the states the MIS is part of an interagency planning effort.

Management information systems' capabilities to provide data at considerable reduction in time and effort appear to be welcomed by vocational agency personnel. Personnel interviewed in one state agency were unanimous in their acclaim of their MIS as a vast, innovative, and as yet largely undeveloped resource in planning. Personnel in another agency indicated that the MIS was better than anything they had ever had to work with before. In two states visited, most of the data used came from either their MIS outputs or local program reports. Personnel in one agency stated that "we probably have put an implicit amount of faith in our system because, in the first place, it's expedient to do so. . . . for three years we haven't used any [ES] publications, anything other than the [MIS] information." He went on to admit that ". . . it may also be dangerous to have so much faith in a system that may not be giving you the exact degree of information [needed]."

Staff generally favorable of MIS efforts

Uses of Manpower Data in Program Operations

Operational activities generally include new program approval, approval of program changes, termination of existing programs, monitoring and evaluation of existing programs, and consultative services to local educational agencies. The usage of manpower data in each of these activities will be subsequently discussed.

Approval of New Programs

The most frequent operational use of manpower data is in the approval of applications for new program starts. Nearly all states provide locals with guidelines for the preparation of applications and program plans. Review of these guidelines and associated application for program funding forms revealed that application forms from three states have no provision for manpower data. Two states require that the locals simply answer "yes" or "no" regarding the existence of manpower need for proposed programs. Several states require that the locals indicate how the need for the program was established. One state requires that the locals indicate with a check mark the services used in the determination of program need, e.g., local advisory council, local/area employment office, industrial surveys, other state agencies, BLS publications, etc. Several others incorporate a statement of manpower needs into a required general narrative description of program needs. None of the states require a quantitative justification of manpower needs, nor do any states specifically

Local manpower needs not expressed in quantitative terms

require the locals to use standard data sources and methodologies in the determination of manpower needs. Locals are apparently free to use any source of manpower data they choose in program justification.

Usage of manpower data in the state approval and allocation process varies considerably across states. Some states make almost no use of manpower data in the program approval process. One state uses manpower data primarily in the identification of new and emerging occupations which are brought to the attention of the locals. Another state assesses district manpower demand according to the number of new programs approved and the number of additional programs offered in the district. Manpower need as a criterion for federal funds is measured in another state by the unemployment rate for youths 16-18 years of age. The review process in yet another state consists of fitting the application into the goals and objectives as specified in the state plan, determining that the program complies with minimum state and federal regulations, examining the budget for reasonableness and funding the project; almost all new programs are funded. In another state, program applications are assigned points on a manpower need scale according to state-wide demand for that occupation. However, one local respondent told us that the primary determinant of program approval in that state is political. Applications in another state are rated on manpower need factors such as number of unfilled jobs, impact of programs on local, state and regional needs, and impact of programs on new or emerging job needs. These ratings are averaged and converted to dollar allocations to supplement a minimum foundation grant. Program applications in another state are ranked and prioritized for funding on the basis of their ability to meet the needs of critical shortage occupations, provide for new and emerging occupations and meet the general manpower requirements of the region served. Yet another state provides the locals with priority areas based on state-wide net demand (growth and replacement) obtained from their MIS output. These priority areas for curriculum development are determined by the state supervisors responsible for each major program area. The most explicit use of manpower data flags programs for consideration for increased growth, modification, reduction or elimination according to whether (1) the enrollment to placement ratio is less than 3:1; (2) estimated demand (growth plus replacements) is in excess of 50 per year; and (3) present impact on the demand by postsecondary colleges and institutes is less than 60 percent. Expansion is recommended when criteria 1, 2 and 3 are met, or when just criteria 1 and 3 are met and public policy indicates strong emphasis on the occupation. Expansion is also recommended when criterion 1 is met but no demand data are available, as in the case of new and emerging occupations.

Each state differs in the program approval process

Locals encouraged to collect their own data

In all states contacted, locals are encouraged to augment state assessment of manpower needs. Several of the state educational agencies offer technical assistance to local districts in designing and conducting area manpower surveys to document local area manpower needs. Locals are frequently encouraged to seek inputs from advisory councils, industrial surveys, secondary manpower data sources, state and local employment security offices, state and local governmental agencies, as well as management information system output to support their contention of employment opportunities.

Local data used to counter state agency assessment

Locals may also contest a state agency assessment of low demand and/or over-supply of trained manpower. One school indicated it had initiated a very successful program in agri-business in spite of "hard" data which had indicated no need. The school had joined a consortium of schools offering agri-business which had established a state-wide network of job development and placement communications for agri-business program graduates. The consortium claimed that there was an average of four to five job openings for every agri-business program graduate produced. In another state a program proposal to train machinists was turned down at one school visited because the state-wide data showed no demand for machinists. The school district secured data from the local newspaper showing double-page advertisements for machinists in that area. Even though most of the demand was from employers in an adjacent state, the project was funded. In another instance, local justification for a carpentry program was provided by letters from a number of contractors attesting to a need for trained carpenters.

Modification of Continuing Programs

Strong local control over ongoing programs

Few states make extensive use of manpower data in decisions concerning expansion or contraction of ongoing programs. Continuation of previously approved programs in one state involves just a routine listing of that program in the local annual plan. Generally, the decision to alter an ongoing program is regarded as a local prerogative. As long as the local plan meets minimum standards, locals in many states have considerable latitude in initiating program modifications. Program continuation is frequently more dependent upon enrollment than upon manpower demand. Enrollments are an important local consideration in program continuation in that state funding is generally on a per student unit basis. As one state vocational administrator told us, program operations' use of manpower data is "probably one of the weakest areas." A similar opinion expressed held that, "For ongoing programs, labor market data does not even exist."

Placement and follow-up data preferred over manpower projection

The predominant perspective of operational personnel in many state agencies appeared to be that of faith in follow-up and placement figures rather than in projections of labor market demand. Reports of what actually happens to program completers placement-wise are regarded as more credible evidence of employment opportunities than are annual and projected statistical estimates of occupational growth and replacement needs. There is a noticeable tendency for program operations personnel to view manpower data with some suspicion and to be skeptical of their use in programmatic decision-making. Operations personnel tend to be less familiar with manpower data supplied by state ES agencies and BLS than are the program planners. They also tend to express less confidence in manpower data from these sources than do the program planners.

Program Termination

State agencies rarely initiate program terminations

As with program modification, termination of programs is primarily a local option. Although states have the legal authority to suspend state support, they are generally reluctant to do so. Most of the locals visited could not recall any instances where the state had taken the initiative to terminate a program. State agency personnel saw the threatened withholding of state funds as having "serious political implications." School codes and the problem of what to do with tenured teachers who may no longer be needed make termination a rather laborious and sticky process in some states. Local option is defended on the grounds that business, industry and union representation on local advisory boards is an adequate safeguard against the continuance of obsolete programs. Since local support generally exceeds state program support, it is considered unlikely that locals would continue to expend valuable resources on programs that did not meet local needs. Reluctance to terminate programs has contributed to a situation in one state where 80 percent of total vocational enrollment is in occupational areas of average or marginal demand.

Program Monitoring and Evaluation

Frequency and scope of evaluations vary

As with the previous activities, the extent of monitoring and evaluation of ongoing vocational education programs varies widely. Program monitoring and evaluation appear to be minimal in six of the ten states visited. Of those remaining states, one state evaluates those schools offering four or more programs. Within one year, the state agency must receive a letter indicating what action has been taken with respect to the recommendations. This same state is attempting to promote management-by-objective techniques in local districts. Another state bases the continuation of federal funding on the evaluation of activities of prior years. The

most extensive monitoring and evaluation effort at the secondary and adult level is that undertaken by one state which each year site-visits 20 percent of the programs in each program area. One state postsecondary agency provides easily administered evaluation procedures and instrumentation and offers assistance in applying the system to community colleges who participate on a voluntary basis. Another state postsecondary agency evaluates all newly approved programs at the end of the first two or three years of operation.

Consultative Services

The consultative service of greatest concern in this study is the technical assistance in planning provided to the locals. In most states visited, technical planning assistance is the administrative responsibility of operational personnel. Again there is wide variance both between and within states in the performance of this activity. In some states, scheduled visits with locals are a standard procedure, while in others, technical assistance is provided on an *ad hoc* basis with the locals initiating the request for assistance. It is generally the case that smaller locals are more likely to request assistance than are the large locals. The larger locals have greater resources--in some cases more than the state agency--and usually have a strong sense of local autonomy. Technical planning assistance generally involves assistance in interpretation of application procedures; explanation of state priorities, goals and objectives; and assistance in preparation of annual and long-range plans. Several states offer assistance to locals in the design and conduct of local surveys to determine the extent of local employment opportunities.

Operational personnel provide local planning assistance

Perceived Needs and Problems

State vocational education agency personnel were asked to describe their needs for manpower data and the problems they encounter concerning the availability and use of manpower data. Their responses were classified according to whether they pertained to data *per se* or whether they pertained to people and organizations. Those responses classified as pertaining to data were further classified according to whether they pertained to the currency of the data, the objectivity of the data, the comprehensiveness and specificity of the data, the geographic coverage of the data or the format of the data. Perceived needs and problems in each of these areas will be subsequently discussed.

Data Needs and Problems

Tendency to distrust published data

Agency personnel in several states indicated a problem with the currency of manpower data supplied by ES agencies. By the time data are collected and published, they are often out of date. Because of sporadic publishing schedules, accurate estimation of publication dates is very difficult. Therefore, state agencies are hesitant to make their planning effort dependent upon a supplier with an unpredictable delivery schedule. There is a discernable tendency of vocational education professional to distrust manpower data, not only that supplied by ES agencies and BLS but that supplied by the educators themselves. One state agency respondent told us,

> Our concern is that it [ES data] does not truly reflect some of the manpower needs areas. . . . Some of that data that they [ES] provide us would indicate there is not a need for expansion of programs--but when we get back to talking to real estate people, insurance people, the health occupations people, they say, "Well, gee, you only show 500 people and we've got 1,000 employed right here." . . . The validity of it is a concern we have.

Lack of confidence in ES surveys

Lack of confidence in employment data supplied by ES agencies in part results from educators' belief that large segments of employers are systematically excluded from coverage. Reference was made to the fact that sampled employer units covered only about 40 percent of total estimated employment. Some state vocational people were skeptical about the representativeness of estimates of the characteristics of the unemployed based only on a sample of people who file unemployment claims. There is also a tendency of some vocational educators to draw the inference that because many employers do not use local ES offices as an employment agency, they are, therefore, systematically excluded from the sample used to estimate employment opportunities. In one state, current economic conditions have led state vocational agency staff to question the accuracy of ES agency projections. Agency personnel in another state felt that the objectivity of ES agency data is suspect because the ES agency appeared to make arbitrary judgments inconsistent with the assumptions, methodologies, and employment projections used by other state administrative agencies. Vocational educators tend to be dubious of the extent to which manpower data at the national level accurately reflect local and regional conditions, especially those in rural areas. An occasional criticism was voiced against the use of local employer surveys conducted by educators as indicators of program need. The optimism of employers was mentioned and the "happy music" in local applications was noted by one state agency respondent who saw one

Local employer surveys questioned

of their tasks as being to "fry the fat of happy noises" out of the manpower data. Supply data reported by OE program codes are regarded by some state agency personnel as an overestimate in that not all program completers enter the labor force, nor do they necessarily find employment in areas for which they are trained.

Agri-business occupations not adequately covered

Problems associated with lack of comprehensiveness and specificity of manpower data with regard to occupational coverage were frequently mentioned. More specificity of occupational classification is desired. Lack of more precise distinctions between traditional agricultural occupations and agriculture-related occupations poses a problem for agriculture program area specialists who are reluctant to accept demand estimates based only on the traditionally defined agriculture occupations. Postsecondary state agencies frequently expressed a concern that the current occupational classifications tend to emphasize the unskilled and skilled occupations at the expense of technical, health and allied health, paraprofessional and social service areas. In one state, for example, breakouts into technical nursing and professional nursing occupations were not available. The category "other laboratory personnel" was cited by community college planners as being less than useful. As one agency person told us, "During the past year we didn't have enough breakout in certain kinds of occupations. For example, we had too many lumped-off by clusters as categories. We need more explicit information."

Too much emphasis on skilled and unskilled occupations

Classification of manpower data by industrial categories diminishes the utility of manpower data for vocational education planning. One state agency staff person told us

> . . . we can't go to the [ES] and say "Now look! How many welders are we going to need next year in the way of replacement due to death and retirement and so on?" They do not break it out that way. They're on Standard Industrial Classification. Somebody's got to make that transposition.[1]

SIC codes pose a problem

Dissatisfaction is also expressed at the grossness of ES agency industry groupings and skill level groupings. One state agency person indicated "In many of these categories, over 50 percent of employment demand is listed as 'not elsewhere classified.' When a sizeable number in a category is listed NEC, you know you have a problem."

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[1]BLS officials in Washington, D. C., informed us that current and projected employment by occupational categories is currently available in all states.

No standard linkage between occupations and OE codes

In five states, transposition of occupational demand to OE instructional program codes is performed by state vocational agency personnel. Only three state ES agencies provide occupational demand estimates by OE program code. In two other states, the transposition is programmed in their MIS. At present, there is no uniformly accepted assignment of occupations to program codes. Five states have developed objective assignment rules and have computerized the process. In the other states, transposition tends to be a "cumbersome and tiresome" hand process. BLS has recently issued a revised procedure for making these transpositions.[2]

Question I-O matrix methodology

Concerns with the industry-occupational employment matrix methodology were expressed. Personnel in one state agency were dubious of the industry-occupational matrix based on the 1970 Census of Population since they believed that the state economic mix had changed substantially. Suspicion of the ability of the matrix model to represent reality is typified by the following comment:

> When you gather data in that particular fashion, you might logically make some assumption that out of this classification so many secretaries are going to be employed; if it's a business of 600, you know a certain percent is going to be secretarial, a certain percent is this, that and the other thing, but all those are assumptions and not really too valid in terms of planning.

Need better information on job duties

Need for more specific occupational information was also frequently cited. State agency personnel are interested in the job duties of a typical job found in an occupation, the training needs, specific skills required, geographic location, and the impact of technological change. Many of these needs relate more to curriculum development than to program planning.

Problems with demand data cited

Need for demand data covered a range of topics. As stated previously, state vocational educators have a need for manpower demand data by occupational categories, preferably classified by OE program codes. Specifically mentioned were needs for employment demand by labor market areas, employment demand generated by new industrial starts, employment opportunities for women, growth rates and time demand curves for new and emerging occupations, and the demand that will result from changing technology.

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[2] Matching Occupational Classifications to Vocational Education Program Codes. Tomorrow's Manpower Needs, Supplement 3 (Revised), U. S. Department of Labor, 1975.

Needs and problems associated with supply data were numerous. With regard to student follow-up data, needs were expressed for placement data, time on first job, situations under which and locations where completers leave their first job, as well as migration patterns of program completers. Increased coverage of supply data is needed particularly with respect to inclusion of outputs from private schools, general education, postsecondary and higher education, military, OJT and CETA-funded manpower training programs. Labor force characteristics such as re-entry rates by specific skills and unemployment by age and occupational category were indicated as well as needs for profiles of the characteristics of those currently employed in various occupations. Occupational mobility and labor turnover data were cited by many planners as being very important but currently unavailable in most states. Projections of enrollments by OE program codes as a function of labor market demand were also perceived to be needed in several states.

Lack of data on supply from other sources

Geographic coverage of manpower data was a frequently encountered problem. In several states, the geographic coverage of ES agency data is seen as being too global to satisfy vocational education planning requirements. State agency personnel in at least six states expressed dissatisfaction with the geographic specificity of manpower data supplied by ES agencies. Desired sub-state areas range from school districts and counties to multi-county regional planning regions. While perhaps wishing for more, most state vocational personnel would regard manpower data at the county and/or multi-county regional or labor market area as a decided improvement over the present state and SMSA coverage. The perceived problem with labor market areas as the geographical unit is that in rural states, especially, the balance-of-state represents too diversified an area to qualify as an economic and social entity with singular needs. The problem of geographic specificity is even more acute for BLS publications which are generally national in scope rather than state or sub-state.

State and SMSA coverage too broad

Problems with the format of manpower data were occasionally encountered. Dissatisfaction with format centers on tabular presentation of manpower data. The standard columnar presentation of data is considered not particularly helpful to vocational educators. Too often, according to state personnel, the local administrator is inundated in administrative problems, and for him to take time to go through large, voluminous amounts of labor market statistics is impossible. It was further suggested to us that state and local administrators do not have the staff nor the expertise to interpret labor market data in the format which is currently presented.

Format of data too complex

Organizational and Other Non-Data Problems Influencing Usage of Manpower Data

Organizational factors play a considerable role in determining the usage of manpower data. For purposes of discussion, organizational problems will be divided into the following categories: secondary/postsecondary articulation; intergovernmental agency relations; state board policies; and local autonomy. Each will be discussed in turn.

Separate boards inhibit program articulation

Articulation between secondary and postsecondary vocational education depends in large degree on the state educational structure. In those states where both secondary and postsecondary agencies report to a common board, shared philosophies, operational policies, rules and regulations tend to ensure a smoother transition from secondary to postsecondary levels. In these situations, secondary and postsecondary vocational agencies are similar in their approach to manpower data in program planning and operations. However, when secondary and postsecondary vocational educational agencies are under separate board control, the effect is essentially two separate delivery systems, each with its separate philosophies, policies and operational styles. In most cases of dual board structure, vocational education tends to be identified with secondary education. This separation of powers and the general tendency for greater autonomy in the approval and administrative control of higher education programs seem to inhibit program articulation and communication between secondary vocational education and community/junior colleges. Community and junior colleges that are under the jurisdiction of higher education tend to place more emphasis on student demand than manpower requirements as the criterion for program need. Their philosophy is to give the students what they want curriculum-wise under the assumption that the students, being generally more mature, know what they want. Optional attendance as opposed to the "captive audience" of the secondary system resulting from mandatory school attendance laws makes enrollments more critical to postsecondary administrators. Since state aid is geared to the number of full-time equivalent (FTE) students, popular programs are the paying programs. Except in those few states where program continuation is dependent upon the placement record, low placement rates affect postsecondary program offerings only in the long run; student demand will eventually dry up for a program whose graduates cannot find jobs. Student demand as a criterion of program need also is more in accord with the individual-oriented academic philosophy of higher education.

More emphasis on student demand at postsecondary level

The effect on the use of manpower data is that state agencies of vocational education frequently have little direct

State cannot enforce local articulation

control over approval and supervision of programs offered in community and junior colleges. Because of the separation of powers, comprehensive state-wide planning for the articulation of secondary and postsecondary vocational education cannot be enforced at the state level in many of the states.

Cooperation between state agencies plays an important role in the availability and usage of manpower data. The cooperative relations between state vocational education agencies and state ES agencies being of concern to this report will be discussed in Chapter IV. Discussion in this section is limited to an accounting of state attempts to improve cooperative agency planning and the problems encountered.

Comprehensive manpower development attempted

One of the states visited was unique in the extent of state-level commitment to comprehensive manpower development. State agencies involved in manpower development are linked together in a network of interlocking committees designed to promote development of a cooperative and unified state programmatic thrust. One of these committees has been designated the state board for vocational education. The state board for vocational education enters into contractual agreements with the state secondary and postsecondary agencies for the delivery of vocational educational services. The secondary and postsecondary agencies have the responsibility of program selection, approval, allocation of federal funds, supervision of programs, promotion of vocational education programs and provision of data subject to overall board policy determination and approval. The vocational education board maintains the right to evaluate program performance. The problems encountered in implementing this approach to comprehensive planning center on obtaining and maintaining cooperation. While provisions are made for the termination of the agreement, the sanctions that can be brought to bear and the options available for alternative delivery of vocational education in the advent of termination are unclear.

No definitive board position regarding student demand vs. manpower needs

State board policies in another state have influenced the usage of manpower data. The state board has been reluctant to take a position on the specific place of manpower data in the state educational priorities. The issue in question is, "To what extent should vocational educators or career educators pay attention to manpower needs as compared to the young people's own choices for their occupational lives?" In lieu of a definitive board position on this issue, the state agency is seen to be walking a middle line between the demands of the labor market on one hand and the interests of students and the commitment to ongoing programs on the other.

Perhaps the most salient factor regarding the use of manpower data is that of local autonomy--the delegation of state-constituted authority to a local governmental unit. State vocational education agencies visited reportedly have relatively little ultimate control over local program planning and operations. In many states, the local educational agencies have almost complete autonomy to determine their own programs within state and federal guidelines. One chief planning director indicated that it is difficult for the state to dictate to the locals the programs they should or should not support. He did indicate that the state does urge the local districts to be aware of the necessity of local programs to meet manpower needs. One state director described the means used to effect state-wide policy changes as follows:

Local autonomy a salient factor

> We usually start with the planning process in the state agency to try and get some handle on what it is we want to accomplish. Then we go to the field and bring in key leaders to whatever areas we're trying to impact because, again with the local autonomy that exists you have to bring them with you, you can't just lay it on if you don't have money.

Additional data-related problems encountered dealt with inadequate resources, limited dissemination and definitions. The requirements of state plan preparation and the effort required to implement the planning requirements contained in PL 90-576 pose a difficult problem for state agencies of vocational education. The lack of resources allocated to planning and particularly the shortage of trained personnel in planning were emphasized. The increased emphasis on planning was seen as calling for decision-making on the basis of sound data which requires that people be equipped with this kind of expertise. It was suggested to us that little in the training of traditional vocational educators prepared them for this role. Generalists who had previously been able administrators were frequently not prepared to cope with a re-definition of their role as planners and managers rather than coordinators and facilitators. Restrictive personnel guidelines in some states inhibit hiring of people with non-educational credentials into state vocational education agencies. Shortages of staff, heavy workloads, and too much time spent on administrative and legislative aspects of the educational process combine to reduce the resources available for manpower planning and program supervision.

Shortage of trained planning personnel

Restrictive personnel guidelines inhibit hiring planners

Persons interviewed occasionally mentioned that lack of dissemination of manpower data is a serious problem. State agency documents, board reports, and ES agency documents

Manpower data not widely disseminated

and other manpower documents were regarded as not being widely enough disseminated to the people who could use them. This problem is discussed further in Chapter IV.

Different definitions a problem

Finally, definitional problems were sometimes mentioned. It was brought to our attention that no satisfactory definition of "postsecondary" exists. Incompatibility of state and federal definitions of "adult" were found in another state. Another agency reported that the definitions of "handicapped" and "disadvantaged" as used by vocational education and by BLS differ.

CHAPTER III

MANPOWER DATA AND LOCAL VOCATIONAL EDUCATION AGENCIES

Summary Observations

- Local vocational education agencies have considerable discretion in selecting the source of the manpower data used to justify their program offerings.
- Published manpower projections tend not to be used in the initial determination of program need; they are more likely to be used to justify a need for programs already identified by other means.
- Information from advisory committees and locally conducted surveys is considered more useful than published manpower data for determining local manpower needs.
- Once a program is installed, manpower projections play a minor role in future programmatic decisions.
- Program contraction or termination is more likely to result from lack of student interest than a lack of available jobs for program completers.
- Many schools have no formal procedures for collecting placement or follow-up information.
- Program terminations are seldom initiated by the state agency.
- The primary purpose of local plans is to secure state and federal funds; they generally are not considered useful in day-to-day planning and operations.
- Considerable subjective judgment is involved in matching program codes to occupational categories.
- Many local planners are unaware of the existing published manpower data available from ES, BLS and other governmental agencies.
- The geographic coverage of manpower data is frequently considered to be a problem, but there is little agreement on the preferred coverage.
- The statistical orientation of most ES and BLS manpower projections inhibits their use.

- Many local vocational education administrators feel they have neither the time nor technical skills to do an adequate job of reviewing manpower data and incorporating them into their plans.

- There is a tendency for local directors to be suspicious of published manpower data and to place greater trust in their own surveys and personal contacts with employers.

- State agencies do not have sufficient staff to provide the local vocational education agencies with the assistance in planning the locals feel they need.

Delivery of Services

Diverse delivery systems

The methods by which vocational education services are delivered to students do not fit neatly into a classification system. Wide variations were observed both within and between states. We visited comprehensive vocational high schools, area vocational schools for secondary students, area vocational schools serving secondary and postsecondary students, postsecondary technical institutes, community colleges and skills centers. At the secondary level, some area vocational schools are located in the same facility that houses a high school, some are located in a separate facility to which students are bussed for part of their school day, and others offer the students both the academic and vocational components of a comprehensive high school education. Furthermore, some comprehensive high schools offer only one or two vocational curricula while others offer many. We visited community colleges where more students were enrolled in college transfer programs than in vocational education programs, and we visited postsecondary technical institutes where all students were enrolled in vocational programs. Regardless of the diversity in the delivery systems visited, they all shared one thing: part of their financial support came from federal vocational education funds.

Description of the Local Planning Process

"Consideration" of manpower needs has various interpretations

In order to be eligible for federal vocational education funds, local education agencies must prepare annual and long-range plans. While all of the local vocational education personnel interviewed indicated that they prepared plans for vocational education in their schools or districts, the scope and detail of the plans varied considerably both within and between states. In all cases "consideration" was given to manpower needs prior to offering a new program. However, the observed diversity in state requirements for reporting manpower data in local plans and the types of data used indicates considerable latitude in the interpretation of the meaning of "consideration" of manpower needs in the planning process.

Variability in local planning procedures

The procedures used to plan for vocational education at the local level can vary almost as much within a state as between states. In some cases most of the planning takes place at the school level, in others at the school district level, and occasionally it represents a multi-district effort. In some states the annual plans submitted by the local agencies cover only new and expanding programs, while in others

the local plans cover all vocational education programs and services. All of the state agencies for vocational education visited provide the locals with guidelines for preparing local plans, and most state agencies have consultants available to assist the local agencies in the planning process. To a considerable extent the guidelines and assistance provided to the local agencies by the state agencies center around VEA entitlements and state policies that will influence local plan preparation.

To illustrate the variations in the procedures followed by local educational agencies in planning new program offerings, the sequence of events followed by two secondary school districts in the same state will be briefly described. The procedures they follow differ considerably from each other, but both are indicative of procedures reportedly used by local directors in other states.

District #1

The initial idea for a new program offering usually emanates from a vocational instructor in the local schools. The instructor talks with other instructors in this school to get their reactions, and if they favor the idea they will probably contact the local vocational education program coordinator to obtain his reaction. If his reaction is favorable, the state vocational education agency will be contacted to: (1) determine whether or not a similar program already exists in a nearby district, and (2) explore the possibility of getting a state agency staff member to help them develop the program. If the state agency gives a favorable response to the idea, an advisory committee is established to assist in curriculum development and identify possible employment opportunities. In most instances the advisory committees in this district serve as the primary source of manpower information used to support the program proposal. The proposal is then written and submitted to the state agency, and a brief description of the program is included in the preregistration materials provided to the students. Student interest in the program is determined during the spring preregistration for the following fall semester. If enough students enroll, the program will begin operation in the fall semester.

Instructors' interests an important factor

District #2

The initial idea for a new program is usually identified through annual surveys of the students' interests conducted by a local vocational education coordinator. Potential programs showing the most student interest are considered

Student interest a prime factor

in the light of existing facilities and their relative costs. Programs which are deemed feasible to offer are then reviewed by the vocational education coordinator to determine employment potential. State ES data are consulted first, followed by surveys of local employers. The local postsecondary vocational-technical school is contacted to obtain additional information on employment opportunities and recommendations concerning the content which should be included in the program. A subject area advisory committee is established to provide additional input into the recommended content of the program and to document further the need for trained manpower in that occupational area. The state vocational education agency is then contacted, and a subject area specialist from the state agency usually helps them plan the program. The proposal is then written and submitted to the state agency.

Little use of published ES data

Keeping in mind that the planning processes exemplified by these two local districts are typical of what was observed in many districts, it is important to note that neither district uses published manpower data initially to identify potential program offerings. Furthermore, only one of these districts even considers state employment security manpower projections in the planning process. The individual we interviewed in that district told us that he places less confidence in published ES projections than advisory committee estimates. In his words, "Where else can you go? A researcher can gather data, it takes him six months to get data into print, and in six months it may be outdated." To reduce the time gap between data collection and publication this district tries to get local or state ES staff members on their advisory committees. In the other district, however, no input whatsoever is sought from employment security in the planning of their vocational education programs.

Student interest eventually determines program offerings

The two districts also differ markedly in the extent to which students' interests are an input into the planning process. In district 2, which is more representative of what was observed in other districts, students' interests are surveyed in the earliest phase of the planning process, whereas in district 1 student interests are not considered until after the proposal is written and submitted to the state vocational education agency. However, in both cases, students' interests as reflected by program enrollments eventually determine whether or not a program is installed. The early surveying of students' interests increases the probability that a program, once approved by the state agency, will also have an adequate enrollment to justify offering the program.

Another important distinction between the two districts' planning processes is reflected in their articulation with postsecondary education. The first district conducts its planning independently from the local postsecondary technical institute, whereas the second district routinely seeks input from the local postsecondary technical institute during their planning activities. In general, we found that the degree of coordination and articulation between secondary and postsecondary vocational schools tends to be inversely related to the distance between them. Where no postsecondary institute or community college exists in the immediate area, there is likely to be no effort to articulate secondary and postsecondary program offerings. In the example given above, district 2 is approximately two miles from the postsecondary technical institute, whereas district 1 is almost thirty miles from the postsecondary institute serving the area. Typically, the articulation that does exist results from local initiative, and communications between secondary and postsecondary vocational personnel are on an informal basis rather than through formal structural arrangements. The need for better communications between secondary and postsecondary vocational schools was frequently expressed by local as well as state-level personnel.

Secondary and postsecondary articulation results from local initiative

The Use of Manpower Data in Program Planning

The guidelines for plan preparation provided to the local agencies by the state vocational education agencies differ in each of the ten states. In a few instances the state agency provides the local administration with manpower data to determine local needs and requires the local agency to follow rigorous procedures if they wish to conduct their own survey of employment needs in their area. In most cases the sources of manpower data that the local agencies could use were largely left up to the discretion of the individuals preparing the local plans. Three examples extracted from state program approval forms will serve to illustrate the diversity in the states' requirements:

State guidelines concerning manpower needs allow for considerable freedom

> State 1: Document the need for additional trained personnel in the occupation or occupational field through recommendations from advisory committees, local surveys, State Employment Service and/or other reliable manpower data sources.

State 2: Are jobs available within the region for graduates? ☐ Yes ☐ No
Job availability identified by:

☐ Community survey ☐ Manpower Council

☐ Employer requests ☐ Rehabilitation

☐ USES ☐ WIN

☐ Other

State 3: Does current manpower data indicate a need for offering this course? ___ Yes ___ No

As can be inferred from the above examples, in most cases the local planners are not required to include manpower projection figures in their plans. Nevertheless, they must be prepared to defend their proposals for new program offerings with some type of supportive documentation. In some cases they are required to show a need in the local community, but in many instances the local agencies have considerable freedom in deciding the boundaries of the labor market for which they are training people. For example, in one high school district a survey of the students' interests showed that many students wished to enroll in an aircraft mechanics program. Proponents of this program offering looked to employment security projections to support such a program, but those projections showed little need in their state. Likewise, BLS regional projections also showed little need for more aircraft mechanics in the region. Finally, written correspondence with airplane manufacturers over 800 miles away resulted in an expressed need for mechanics, and this information was used to document the proposal for program support.

Locals decide on labor market training boundaries

While published manpower projections are occasionally used to show a need for a new program, once a program is installed manpower projections play a minor role in determining its future. Program continuations are largely a local decision, and very few of the local administrators visited were required to include manpower projections in support of their plans to continue ongoing programs. In many instances student placement or follow-up data on program graduates are used in determining the need for existing programs. If a program has a high placement rate and high student interest, it is likely to be continued or expanded, regardless of what manpower projections might show. However, very rarely are

Little use of manpower data to support ongoing programs

programs contracted or terminated on the basis of low placement rates. The prevailing philosophy seems to be that as long as students continue to enroll in a program, the program will be offered. In one state none of the four local districts we visited had ever terminated a program. A state agency staff member in this state told us, "There's an awful tendency to hang-on to what you have been doing and to add more in without throwing anything away, because whatever we have, we always think it's pretty sacred." In only one state did we find evidence of a local program's being terminated as a result of pressure from the state vocational education agency.

Few program terminations

Manpower projections developed by the state employment security agency or BLS thus play a relatively minor role in program planning at the local level. They are used to support proposals for new program offerings when they show a projected manpower need, but they are frequently displaced by documented student interest when the manpower projections do not show a need for the program. The typical procedure is to search for data to support a program that is being proposed rather than to use published manpower projections in the initial determination of which programs should be offered. The idea for a new program is most likely to come from surveys of students' interests, instructors' desires, advisory committees, or contacts with local employers or professional associations. If the cost of the program is not excessive, manpower data will be sought as a justification. If employment security data show a projected need for graduates from such a program, the data are likely to be cited as evidence of need. If ES data show no such need, other means will be sought to document the need for the program. In most of the states visited the local agencies have considerable freedom in conducting their own surveys. Standardized survey procedures are rarely required. In a few instances surveys are conducted in cooperation with the local employment security office, but more frequently they consist of informal telephone or mail contacts with local employers. We also found cases where classified advertisements in local newspapers were used as evidence of program need.

Data used to justify rather than determine need for programs

The rationality of students' interests in determining program offerings cannot be overestimated, particularly at the postsecondary level. By offering programs in which many students are interested, enrollments are increased, and increased enrollments result in additional funds. At the postsecondary level students have more freedom in selecting an institution, and the institution wishing to increase enrollments, and thereby its financial support, must appeal to students' interests. Furthermore, in some states where local dollars support the postsecondary institutions, if a student residing in one postsecondary district enrolls in a

Student interest determines financial support

program in another district, his home district must reimburse the receiving district for the cost of his education. In these cases, the student can only attend a school in another district if the program in which he wishes to enroll is not offered in his home district. Thus, it is to the financial advantage of local postsecondary districts to offer programs that will minimize the number of students from their district who attend programs in other districts. Unfortunately, manpower projections and students' interests are frequently divergent, and program offerings tend to be influenced more by the latter than the former. As one local director told us:

> There are many factors--many of them that probably shouldn't really be too involved--but if we have a good teacher in some area, in real estate, let's say, who can teach real estate in the D.E. [distributive education] area, even though statistics may indicate that there might even be a surplus of real estate licensed individuals, if the teacher is good, if there is enough student interest, we probably will run that class if the kids feel it's of value to them, if we had the physical facility. We would probably alert the students to the fact that there are many unemployed people trained in real estate. And this was actually the case, of course: Last fall we had an excess of people trained in the field of real estate.

It is important to note that the real estate program referred to above was an ongoing program, and ongoing programs are frequently not reviewed or evaluated in light of published manpower data. Such data are seen as being of more value in justifying the need for new programs. After the program is installed, placement and follow-up data are considered to be of much greater utility than manpower projections. Several local directors told us of programs in their schools which had high placement rates while manpower projections showed little or no need for additional trained personnel coming from such a program. Many of the vocational districts visited at both the secondary and postsecondary levels had no formal procedures for collecting either placement or follow-up data on graduates. Programs continue to be offered as long as there are adequate student enrollments. In the end, we were told, the well-being of the institution depends upon its finances, and current funding processes are based on enrollments rather than placements. Because of this, many local directors felt that manpower projections can play a more useful role in student guidance, which will be discussed later in this chapter.

Few formal procedures for follow-up

From the expressed point of view of the local administrators, the primary purpose of their annual plans is to secure state and federal funds. The document which they submit to their state vocational education agency, whether it is called a plan or a proposal, is developed in accordance with guidelines provided by the state agency. While a few local vocational educators told us that their plans were useful in their day-to-day planning and operations, most considered the information contained in their annual plans to be of limited value to them locally. One local director considered their local plan preparation to be "a waste of time," while another said, "Everyone talks about the necessity for planning, but very few people actually know how to do it."

Information in local plans of limited value

The manpower data that are used to support local requests for new program approvals were described by several local directors as "guesstimates" of employment potential which are primarily used to comply with state requirements. In one state, with a well developed management information system which supposedly provides manpower projections to the local administrators, a local director told us, "Obviously, good, reliable, current data would be nice to have. I'm not sure that any system can really deliver that."

In four of the ten states visited, the state vocational education agencies regularly provide the local districts with manpower demand projections to be used for local program planning. These data are usually based on state employment security projections and are generally not broken down to substate areas. In two of these four states the locals indicated that the projections were the best published data they had ever seen, but were not without problems. Given the rapid economic changes that have taken place during the past few years, local administrators felt that projections that were more than two years old should not be taken too seriously when used for manpower planning. Local surveys are usually preferred because they cover the geographic area of interest to the local district and result in more current data. Many locals expressed the opinion that the published manpower data provided by the state make it easier for them to justify programs they wish to offer (assuming the projections were supportive) but local surveys could be used to justify programs that are not in accord with state-wide projections. In several instances local vocational education directors within these four states told us that they are not receiving any manpower projections from their state agency; however, most of them were aware that the state is supposed to be providing them with such data. They were not making much of an effort to get the data from the state agency because from what they had seen of earlier data provided by the state agency, they felt

Data currency and geographic coverage two major problems

Local surveys preferred over published data

that they were able to collect more accurate and usable data on their own. As one local director described it, "I may be being too critical, but I can't see much difference in that data [provided by the state agency] and what's already available to us. They just put the same data in [their management information system]."

Almost all of the local directors indicated that their state agency would provide them with assistance in program planning if they requested it. In a few states all local directors meet with state agency personnel on an annual basis to review state priorities and policy changes, but for the most part technical assistance results from local requests. When such assistance is requested and provided, the local assessment of it is generally favorable: "We get tremendous assistance," said one local secondary director, while a postsecondary director commented that he was "most pleased with the help from the chancellor's office." The locals tend to feel that state agency personnel are especially helpful in curriculum development, but are of less value in the earlier stages of planning. In part, this can be attributed to the tendency for state agency consultants to be specialists in a particular subject area rather than being planning specialists. In only one state was there a state agency consultant working with the local agencies who was a specialist in the uses of manpower data in program planning.

State assistance of more value in curriculum development

The Use of Manpower Data in Program Operations

It was noted earlier that manpower data, and particularly manpower demand projections, appear to play a minor role in the review of ongoing vocational education programs. Once a program has been installed, student interest, as reflected by enrollments, becomes the most dominant factor influencing the future of a program. The local vocational education director is frequently confronted with the situation where manpower demand projections and current placement rates indicate that graduates of a particular program will have a difficult time finding employment, and yet a large number of students continue to enroll in that program. The director is faced with a decision on whether he should continue the program on the basis of student demand or terminate the program on the basis of limited job opportunities. Our experience suggests that programs tend to be offered as long as students continue to enroll and that manpower data are used to inform the students of their future employment prospects.

Data used in student guidance

This study was not designed to document the use of manpower data in student guidance. However, during our interviews with local directors of vocational education, we were told of various methods by which manpower data are provided to students to assist them in selecting a vocational program. This section will describe a few of the practices we observed.

One of the area vocational-technical schools visited serves high school students in eight school districts. In order to provide occupational information to these students, counseling vans carrying guidance counselors and quantities of occupational information make regular visits to each of the high schools in the area. Brochures are distributed, printed in English and Spanish, which describe a variety of occupations. These brochures describe the occupations in terms such as the type of work, educational requirements, starting pay, probable benefits and typical employers. Interested students can fill out an educational and career planning questionnaire. Their responses are analyzed by computer and returned to the students' counselors in their home high schools. The student and counselor review the information together to help the student plan his career future.

A computer-based interactive career guidance system is operating in one of the community colleges. This system enables the student to interact with the computer "in such a way as to examine and explore his own values, obtain and use relevant information, interpret predictive data, and formulate plans." This process is intended to assist the student in making tentative career decisions and to review his decisions as he gains additional information and insight. Information is available on employment opportunities, but this employment information is based on national rather than state or local conditions.

School counselors work in ES offices

In order for guidance counselors to be better informed on local employment opportunities, school guidance personnel in three states visited worked in local employment security offices during the summer months. In one instance the counselors were working without pay, an indication that they apparently found this to be a considerably worthwhile experience. Furthermore, in one of these states the local employment security offices were providing the counselors with information on current employment opportunities in their service areas, which was used for both guidance and placement purposes.

In one school district every ninth-grade student is required to review a career registration booklet which lists occupations based on the 12 career clusters identified in the

Occupational Outlook Handbook. Each student chooses an occupation or career cluster that seems relevant to his vocational interests. The choice is recorded for each student, and a schedule is prepared for grades 10-12 showing all of the required and elective courses in both general and vocational education leading to graduation in a program with the selected vocational emphasis. The student submits a new registration form at the beginning of each high school year and either maintains or modifies his schedule to match his current interests. A student can also modify his schedule during the school year; however, to do so he must work with a school counselor who advises him of the impact the change will have on his plans.

Use of data in guidance and planning not coordinated

While one might speculate that districts that pay the most attention to students' interests in planning programs provide the student with more manpower data on which to base their decisions, we observed no such pattern. It appears that in many instances the student guidance and placement personnel use manpower data as they personally see fit rather than in a coordinated effort with the program planners. We could not detect any systematic relationship between the utilization of manpower data in program planning and its use in student guidance on a district-wide basis.

Perceived Data-Related Problems and Needs

Each of the local directors was asked a series of questions concerning various aspects of manpower data, e.g., their currency, objectivity, geographic coverage, etc. In this section we will summarize the major problems, needs and recommendations described by local vocational education directors.

Currency

Prefer data not more than one year old

Many local directors felt that the published manpower data they were using were out of data. Several school districts are using 1970 Census data in their plan preparation and report little confidence in their current accuracy. Data on current manpower demand are frequently felt to be out of date even prior to being received by the local personnel, who expressed a preference for data not more than one year old. Likewise, we were told that manpower demand projections on Standard Metropolitan Statistical Areas should be updated annually. One local director recommended that this should be done by providing computerized access to the larger schools or districts. Several local directors in rural areas noted

that they receive manpower data less often than the urban districts, and because of this the data they receive are frequently considered to be out of date.

Objectivity

For the most part, few local directors indicated problems in the objectivity of published manpower data. The two most frequently expressed concerns were related to the sampling procedures used by state employment security agencies and the procedures used in extrapolating local manpower needs from state-wide projections. Some educators felt that since many small businesses and some very large employers are not surveyed by ES they are, therefore, excluded from employment security projections. To document their belief, several local directors pointed to differences between the published data and the results of their employer surveys and placement records. In two states, where the state vocational education agency management information systems provide annual manpower demand projections for regions within the states, several local directors felt that the extrapolation procedures used by the state agencies do not result in accurate projections of local needs. This was repeatedly expressed by the local directors in rural areas within these states. As in the case of the perceived bias created by employment security sampling procedures, these local directors noted the differences between the state agency demand projections and the results of their local surveys and placement records.

Comprehensiveness

Comprehensiveness of data seen as a major problem

Date comprehensiveness--that is, the extent to which enough information is provided--was seen as a major problem area by the local vocational education directors. The problems and needs they reported can be categorized into three major classes: occupational, manpower supply and manpower demand.

Occupational coding problems

Two major problems related to occupational categories were repeatedly mentioned by local directors. The first of these has to do with the occupational classification systems currently being used. Transforming occupational categories into program categories was felt to involve considerable subjective judgment, and many local directors strongly recommended the development of a uniform coding system that would integrate the Department of Labor and Office of Education coding systems.[3] Census codes were felt to be too

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[3]See footnote on page 25.

general, while DOT codes were considered too specific. A related need is the identification of occupational families and training clusters based on similar skill requirements. These would allow for the clustering of occupations according to the similarity of skills required and the clustering of programs on the basis of their shared content matter.

The second problem related to occupational categories concerns the need for more precise occupational definitions based on the required competencies. As one local director described it,

> The thing that I've heard people say more than anything else, is not the data itself, they don't want the statistics of bodies, they want to know what the job itself actually entails. They're getting back to job descriptions. . . . The disparity is fantastic and the commonality is pretty thin. . . . If there was a common element of factors of what people were supposed to do occupationally, career wise, boy this would be the single biggest boon that ever was.

Need better occupational definitions

A related problem identified by several local directors was the need for descriptions of new and emerging occupations in terms of their required competencies.

Problems related to the supply side of manpower data center on the lack of information on the numbers of trained workers being supplied by community colleges and postsecondary technical institutes, private schools, and the military. Several local directors of postsecondary institutes and community colleges pointed out that they are unable to determine the number of graduates, by program, who are being supplied by other public postsecondary institutes in their state, and the situation is much worse with regard to the private schools. Some local directors felt that this would be of more value than any other data not currently available to them. This problem is particularly acute where postsecondary institutes within the same SMSA are utilizing the same manpower demand projections and training as many graduates as the demand projections indicate are needed.

Lack of supply data

In several states local directors of vocational education said that one of the major problems they experience in planning results from a lack of comprehensive information on the current and anticipated program offerings and enrollments in other vocational schools. There is little attempt at the local level to coordinate the program offerings of comprehensive high schools, area vocational schools, community colleges and private schools. These directors noted that the published manpower demand projections that they

Lack of coordination with other schools

refer to are also being used by other vocational planners in their area, and yet no formal procedures exist to communicate and coordinate their plans. Likewise, they frequently cannot obtain information on the current program offerings of other institutes, even within their own county or SMSA. While they might be able to collect information on the program offerings of public schools in their area, we were told that "a problem is to get the private schools to tell you how many are being trained. They won't tell us."

A variety of needs were mentioned concerning manpower demand data. One expressed need that is not being met in any of the ten states is the distinction between the demand for skilled workers with job experience and the demand for recent program graduates without job experiences. One director said that while he felt the number of positions given in the employment security demand projections was probably accurate, he did not know whether they referred to recent program graduates or workers with five or more years of job experience. Manpower demand projections

> . . . only tell you the jobs exist and it looks as though they will have a need for additional people, but you don't know what kind of people they're looking for. . . . Unfortunately a lot of "snow-words" come in. "Machinists" is an example. Will they take a one or two year trained person and allow him to work up to a machinist, or are they only employing journeyman machinists?

Demand data not adequately qualified

Because of this lack of information, this individual could not trust the published manpower projections and, therefore, conducted his own survey of local employers to determine the need for recent program graduates. A similar problem was noted by other local directors of postsecondary vocational programs. They want the manpower demand data to identify the occupations for which institutional vocational training is actually a prerequisite for employment. This again relates to the need for more precise manpower supply data, since these directors could not determine the extent to which the demand could be filled through on-the-job training by the employers.

Several local directors expressed a need for better demand projections on new and emerging occupations. They felt that these occupations are usually not covered by ES projections, and it is often difficult to identify potential employers in order to survey their need for trained people in the new occupations. One local director told us that when he considers offering a new program to train for a new or emerging occupation, he contacts other community colleges and postsecondary institutes across the country which offer a similar

Need information on new and emerging occupations

program. He asks those institutions how they determine the demand for graduates of their program and to specify the types of employers who hire their graduates. With this information he conducts a survey of similar employers in his community to determine the required skills and the number of graduates the employers could hire. In conjunction with this, some local directors said that both program planning and student placement would be greatly facilitated if the manpower demand data included more specific information describing the types of employers most likely to need graduates of their programs. Ideally, they would like to have localized manpower demand data classified by industry. One director pointed out that confidentiality laws currently prohibit them from getting this information: "Industries and business seem to feel that if people know the numbers and types of people they employ that it gives their competitors an unfair advantage . . . and that's the basis of confidentiality."

Geographic Coverage

Many local directors told us they would like to have more localized manpower data, but there was little agreement on the level of geographic coverage that would best meet their needs. While there was almost unanimous agreement that state-wide aggregations of data alone are inadequate for local planning, some individuals told us that multi-county or sub-state regional-level data would meet their needs, others felt that county or SMSA-level data would be of greatest value, and a few local directors wanted the data broken down by census tract or school district. Differences in opinions concerning the needed level of geographic coverage were observed both within and between states. In a single state, for example, the four local directors we interviewed gave the following responses concerning the preferred level of geographic coverage: census tract, SMSA, county and multi-county.

Little agreement on best level of geographic coverage

Format

The format of published manpower data, and particularly manpower projections developed by state employment security agencies, is regarded as being "too statistical" for local vocational educators' needs. Several local directors commented that the statistical orientation of BLS and ES manpower projections detracts from the usefulness of the data. One local director noted that

Data too statistical in format

> the data is really not organized or broken down the way it could be useful in local planning. It's still clustered together in the traditional ES categories or Census categories, and you have to dig into those categories just to see what things are in a cluster.

The DOT categories frequently used by state employment service agencies are generally considered to be too specific for vocational education planning, and, as noted earlier, several local directors noted problems in interrelating these codes with USOE program codes.

Fewer problems in data format were cited in those states where manpower data are prepared by state vocational education agencies or through a joint effort with employment security. In those instances where local directors felt that the format of the data is useful for program planning purposes, it was occasionally pointed out that a different format would be more appropriate for student guidance and placement purposes. However, while many vocational educators said that the format of published manpower projections could be improved, they were more concerned about other previously discussed aspects of the manpower data.

People and Organizational Needs and Problems

Many of the needs and problems described by local directors of vocational education are not intrinsically related to manpower data but to other factors impinging upon the planning process. This section focuses on those problems and needs as expressed by local directors of vocational education.

State Planning Requirements

The problem most frequently reported concerning the planning requirements of the state agencies relates to the relative lack of utility of the information contained in local plans. In every state visited one or more local directors expressed the opinion that the information contained in the plans they submit to the state vocational education agency is not particularly relevant to their local planning needs. In part, this was attributed to the very limited requirements for data to support ongoing programs. Thus, the local plans primarily focus on justifying new program offerings, with relatively little attention being paid to programs already

Local plans not relevant to local planning needs

in existence. Even for new program starts, the local directors' assessments of the utility of the data required by the state to document the need for new programs were not very favorable. One local director referred to the required supportive data as "window dressing," while several others merely noted that the inclusion of the manpower demand information in their local plans is principally to comply with state agency requirements rather than to meet local planning needs. The information required of them was considered to be somewhat superficial and much too general to be of use later in placing graduates.

State Assistance to Local Planners

Earlier in this chapter it was noted that the local vocational education directors were generally satisfied with the assistance their state agencies are providing them. For the most part, this assistance is in response to local requests; however, because of limited state agency resources, the assistance is not always seen as being adequate to meet the local needs. Three needs were most frequently expressed by local directors: (1) more direct state assistance in preparing local plans; (2) providing the local planners with more accurate and current manpower data; and (3) training the local personnel in the use of manpower data.

Three needs frequently expressed

A few local directors felt that school districts located nearer the state capital receive more assistance and manpower data from the state agency than local agencies at a distance. They recommended that the state agency hire an "itinerant planner" to travel to each local district in the state to assist each in collecting data, analyzing them and preparing local plans. Several local directors who were receiving manpower data from their state agencies pointed out that they had never received any direct assistance in how to analyze and use the data, and felt that the data would be of much more value to them if someone would show them how to use data in planning. It was recommended that the state agency sponsor workshops on (1) how to obtain manpower data from governmental and private agencies; (2) how to interpret and use the resulting data; and (3) how to evaluate manpower data.

The inability of state vocational education agencies to provide the types of assistance the local directors feel they need was usually attributed to a lack of resources. As one local director described it,

> My recommendations for the improvement of the service of the state [vocational education agency] would have to be directed to the legislature. They [the state vocational education agency] just don't

> have the manpower to give the service to the vocational people in [this state] that they should be giving. That's not their fault. They just need more people.

Local Planning Skills, Resources and Constraints

Three problems which influence planning were frequently mentioned by local directors of vocational education: (1) they were unaware of the existing published manpower data available from employment security, BLS and other governmental agencies; (2) they had never been trained in the analysis and use of published manpower data; and (3) their other administrative duties restricted the amount of time they could devote to the collection and analysis of published manpower data. In addition, there is a tendency for local directors to be suspicious of published manpower data and to place greater trust in personal contacts with employers and advisory committee members. For example, one local director, when asked about the single source of manpower data that was most useful to him, replied,

Tendency for local personnel to be suspicious of data

> That would be hard to say. I've had so little that comes in that I would [say] - it almost boils down that I don't have any data at all. . . . I would say our advisory committees, local advisory committees, would be the best because there's really no agency that's providing any data to us. . . . I'm saying to you that there's no agency that submits to me, to my office, any manpower planning data.

Several reasons were given for not attempting to make more use of published manpower data. Lack of staff time to acquire and analyze the data has already been mentioned. The quick, personal responses that advisory committee members can provide are seen as being adequate to meet the local directors' needs for manpower information, as well as being a less laborious process. Since most state vocational agencies do not require the local administrators to plan on the basis of published manpower data, and since they have not trained the locals in how to use published data, advisory committees and local contacts are considered to be adequate sources of manpower information for program planning purposes. Furthermore, by basing programmatic decisions on local input from employers, a relationship is established which can later facilitate placing the graduates of those programs.

Advisory committees seen as adequate source of data

Local autonomy respected

Once a local director has the support of the school superintendent, the board of education, or the postsecondary

administrative hierarchy, the state vocational education agency is reluctant to create a confrontation by disputing the local plan. If a program under consideration has strong local support and there is any evidence to show manpower demand, the state agency is very likely to go along with the local plan proposal rather than risk an unpleasant confrontation. As one local director described it, "Our local plan isn't approved, it's submitted and accepted. It's that sort of thing."

CHAPTER IV

THE ROLE OF EMPLOYMENT SECURITY AGENCIES

Summary Observations

State ES Agencies

- Few state ES agencies are financially able to provide special data compilations in answer to specific requests from vocational education program planners.
- Several state ES agencies do not provide occupational projections to vocational educators on an annual basis.
- Staff cutbacks and a shortage of trained personnel are viewed as a pervasive problem in nearly all state ES agencies.
- Fewer services are provided to vocational education because of ES staff reductions.
- Job placement services are given top priority by employment security agencies.
- State vocational education agencies rarely reimburse state ES agencies for special services provided them.
- BLS technical assistance is highly regarded by state employment security agencies.

Local ES Offices

- Most contacts between educators and local ES staff are on an informal basis.
- ES services provided to schools are being curtailed because of budgetary cuts. A wide variety of services are no longer being offered.
- Local ES offices receive few requests from educators for manpower data.
- Few ES local offices publish local manpower data.
- The operating budgets of local ES offices are partially based on their job placements.
- School placement services are seen as duplicating, even competing with, the placement function performed by ES local offices.

- "Paperwork" takes up considerable ES staff time that could be used to provide better services.

State ES Agencies

Relations with Vocational Education

Formal and informal relations

Staff relations with state vocational education and ES personnel occur on both a formal and an informal basis. Formal relations between the two agencies are generally of two types: cooperative agreements where both parties agree to perform certain reciprocal services, and structural organizational linkages. Informal relations are those communications that flow between agency personnel on an *ad hoc* basis.

General manpower information usually provided

Cooperative agreements are included in eight of the ten state plans examined. The agreements vary in nature and scope of the services to be performed. In seven of the eight cooperative agreements, ES agencies agree to provide general manpower information in return for which vocational education agrees to supply information on the types of programs and the numbers completing those programs. The cooperative agreement in the other state deals solely with testing, with ES agreeing to provide a test battery to the state vocational agency and the state agency agreeing to make the data available only to schools with qualified counselors. Several ES agencies have agreed to provide job counseling, testing and placement services to vocational students. Only one cooperative agreement provides that ES will conduct special studies (when appropriate and possible) regarding job opportunities and specifications, new and emerging occupations, changing labor market conditions, educational requirements and other related matters. ES will conduct new or additional studies of manpower needs for occupations which vocational education considers most important, *provided* that vocational education submit a written request to the Secretary of Labor for funds to the extent available under Sec. 103(a)(1) of PL 90-576. A unique feature of one agreement is that ES makes periodic reviews and evaluations of the adequacy of state, area and local vocational efforts to meet manpower needs and proposes to the state vocational agency additions, changes or deletions of specific training programs.

ES to review vocational efforts

Inter-agency task force monitoring manpower information system

Structural organizational linkages range from agency organizational arrangements and shared employees to formal committee membership. One state ES has an office devoted to promotion of manpower/education cooperation. This office was established and initially directed by a former educational administrator. They are currently administering a program where ES counselors plan and conduct cooperative projects with local school districts to provide labor market/occupational information, manpower projections,

employment service testing resources, employer information and other job resources material. In addition, this particular state has established a task force of representatives from state and regional ES and vocational education agencies, state community colleges, the state advisory council, chamber of commerce and state finance office to monitor an ongoing cooperative ES vocational education project to "design, implement and evaluate a comprehensive information system to match manpower supply data with manpower demand data . . . in a large SMSA." Another state has worked out an arrangement whereby for the past two years a staff member of the state vocational education agency has worked on-site in the state ES office on a part-time basis. This person is also responsible for preparation of the state plan for vocational education.

ES staff on vocational education committees

Formal relationships in other states are through formally constituted committees. In two states, the deputy director of ES is a member of the state advisory council on vocational education. In another state, the assistant director of the state executive agency having jurisdiction over ES is the chairman of the state advisory council. The director of the ES in one state sits on the vocational education board, and a staff member of the research and analysis (R&A) branch of his agency is a member of the advisory committee to the state vocational agency.

Informal communications tend to be problem-oriented

Informal agency linkages are generally through personal communications of agency personnel. In one state, there is a strong informal linkage between a curriculum and data specialist and the director in charge of public relations for ES. Vocational agency personnel responsible for collection, analysis and interpretation of manpower data generally have developed good rapport with ES personnel, especially those in R&A. Informal communications tend to be problem-oriented, with vocational personnel generally initiating the requests for assistance. For the most part, ES views the requests by vocational personnel as reasonable. One notable exception is the re-occurring requests for manpower data for specific geographic areas such as school or community college districts. Most ES agencies have neither the technical capability nor the available resources to provide manpower data at that degree of specificity.

Services Provided

Publications provided but special analyses usually not performed

Services provided vocational education by state-level ES agencies primarily consist of dissemination of periodic and irregularly published manpower and labor market information reports. These reports are generally produced as a product of routine agency operations. Few state ES agencies are willing or able to provide special data compilations in answer

to specific requests. Most requests are answered through the provision of already available reports. State ES agencies frequently have catalogs of agency labor market information publications that are available upon request. Dissemination policies and procedures differ across states. Many states routinely disseminate manpower reports via a mailing list. Others disseminate on an "as requested" basis. Some ES agencies decentralize the dissemination process by routing requests for information to regional labor market analysts or to local employment offices. Several state ES agencies have no formal policy for dissemination nor any acquisition unit designated as specifically responsible for the dissemination service function. A notable exception is the employment of a librarian in one state ES to answer requests and to work with librarians across the state to improve their knowledge of ES offerings.

Available Manpower Information

State ES agencies are required to prepare continuing federal reports for the following programs: unemployment insurance, disability insurance, employment service, manpower training program, labor market information and current employment. These reports provide the basis for the quantitative manpower information published and publicly disseminated by ES. Each federal report typically available which provides information of potential concern to vocational educators will be subsequently described in terms of title, content and frequency of publication. Titles and content of the federal reports need not necessarily coincide with the titles and content of ES documents published for public dissemination, as the format of the federal reports is dictated by federal reporting requirements.

1. Unemployment Insurance Federal Reports

Title: Employment and Payroll

Content: Employment, wages, and contributions by UI program by industry in the state

Frequency: Quarterly

Title: Characteristics of the Insured Unemployed

Content: Characteristics, occupation, industry attachment and duration of unemployment

Frequency: Monthly

Title: Report of Work Stoppages

Content: Employers and unions involved in trade disputes by industry codes, time period or work stoppages, number of idle workers

Frequency: Monthly

2. Employment Service Federal Reports

Title: Employment Service Automated Reporting Service (ESARS)

Content: Characteristics of applicants provided job services

Frequency: Monthly

Title: Annual Rural Manpower Report

Content: Review of activities in state agencies farm placement programs

Frequency: Annually

Title: In-Season Farm Labor Report

Content: Estimated employment of seasonal farm workers and wages by crop activity

Frequency: Monthly

Title: Domestic Agriculture In-Season Wage Report

Content: Prevailing wages for specific crop activities

Frequency: Irregular

3. Manpower Training Program Federal Reports

Title: Monthly Summary of Enrollee Characteristics

Content: Summary of characteristics of WIN new enrollees and enrollees terminated by project

Frequency: Monthly

4. Labor Market Information Federal Reports

Title: Labor Market Bulletin

Content: Data on employment and unemployment, current narrative on labor force developments

Frequency: Monthly and bimonthly

Title: (State) Annual Manpower Planning Report

Content: Labor force, employment by industry and occupational detail, unemployment, characteristics of disadvantaged and outlook for next year

Frequency: Annually

Title: (State) Labor Market Bulletin

Content: Labor force, employment in industrial detail, unemployment, unemployment rate, and UI-covered unemployment; employment, unemployment and unemployment rate for sub-state areas; earnings and hours data

Frequency: Monthly

Title: (State) Statewide Monthly Work Force Summary Report

Content: Tabular presentation for current month, preceding month, and year ago figures for state as well as employment in industrial detail, unemployment and unemployment rate

Frequency: Monthly

Title: Annual Statewide Work Force Report

Content: Non-narrative data on employment and unemployment by sub-state areas

Frequency: Annually

Title: Work Force Data for Areas of High Unemployment

Content: Non-narrative data on employment and unemployment for counties

Frequency: Annually

Title: Labor Force Series, Employment and Unemployment

Content: Statistical series by month, year and annual averages

Frequency: Annually

Title: Area Manpower Review and Annual Manpower Planning Report

Content: Data on employment and unemployment, current historical and forecast narrative on labor force developments, information on industrial hiring patterns, characteristics of disadvantaged persons

Frequency: Semi-annually for Area Manpower Review
Annually for Annual Manpower Planning Report

Title: Universe of Need for Plan of Service and Manpower Services

Content: Labor force, total population by age, civilian labor force, universe of need, school dropouts, veterans needing service, welfare recipients by sub-state areas

Frequency: Annually

Title: Estimated Total Civilian Labor Force, Unemployment and Non-Agricultural Wage, and Salary Employment by Industry

Content: Work force data by month distributed by industry

Frequency: Annually

Title: Monthly Report on Employment

Content: State and area current employment estimates--latest month, preceding month and current month a year ago

Frequency: Monthly

Title: Monthly Report on Earnings and Hours

Content: State and area current earnings and hours statistics--latest month, preceding month, and current month a year ago

Frequency: Monthly

Title: Report on Employment, Report on Hours and Earnings

Content: Benchmark adjustments, new series, and annual averages

Frequency: Annually

Title: Characteristics of Affirmative Action Programs

Content: Minority population, minority work force participation, minority availability and unemployment

Frequency: Annually

State reports prepared by ES agencies reflect unique state legal, administrative and public policy requirements. Because of the wide variety encountered, only a limited number of state reports are listed below to exemplify the manpower data currently being collected by one of the states visited.

5. Selected State Reports

Unemployment by Age, Sex, Length of Employment, Industry and Employment Based on One Percent Sample

State Farm Establishments by Size and Industry

State Agricultural Workers with Earnings Under Disability Insurance Only

Public Employment Programs Monthly Status Report

State Employment and Payrolls in Agriculture Labor

Agricultural Employment by Type of Worker

State Guide for Farm Workers

Earning and Hours, State and Metropolitan Areas

Women Workers in State

County Labor Market Survey

Study of Covered Employing Establishments by Size of Firm and Industrial Activity

Jobs Bulletin

County Employment Series

State Labor Supply and Demand Series

Labor Market Letters

State Unemployment Fact Sheet

State Labor Market Areas Ranked on Basis of Rate of Unemployment

News Release - State Unemployment Estimate for Current Month

Manpower Developments in State

State and Area Labor Trends

Annual Labor Force Trends

Annual Labor Force Summaries

Current Labor Force Estimates--Smaller Areas

Cities Data

State Employment and Earnings and Labor Turnover

Report of Placements and Gross Receipts of Private Employment Agencies

Data Card

County Work Force Estimates

Migratory Workers in State Fact Sheet

State Economic Indicators

Occupational Opportunities for States

In addition to federal and state reports published on a periodic basis, most state ES agencies also publish a number of documents on an irregular schedule. Irregular publications generally include the results of special surveys, technical reports, labor market and occupation information and are disseminated as books, reports, pamphlets, bulletins and posters.

Vocational education agency contracts for ES services

A unique instance of a special publication was encountered in one state where ES has published a two-volume report on technical manpower which contains characteristics of employment, sources of workers, education and experience requirements for technical occupations, job vacancies, employer views and policy on utilization and education of technicians, information on employer technician training programs and projected job demands. This information is based on a survey using teachers from public vocational high schools and community colleges as field interviewers. The survey data were analyzed, interpreted and published by ES under contract with the state vocational education agency. Another special report of concern to vocational educators published by the same state ES is a follow-up survey of vocational-technical high school students to ascertain whether students are working in their area of training, what their earnings are and what their mobility patterns are. A cooperative study between ES and vocational education involving the following-up of 10,000 apprentices is currently underway.

ES technical reports are too specific for other agency use

Technical reports and papers deal primarily with methodological issues and advances and are felt by ES personnel to "seldom have interest outside." Examples such as "Estimated Urban Labor Force, Employment, and Unemployment Rate 1950-1972," "National Employer Tax Rates in a Reserve Ratio Plan" and "Unemployment Insurance When Taxable Payrolls Change at a Constant Rate" tend to reinforce their conclusion.

ES provides guidance-oriented publications

Most of the ES agencies that were visited publish general labor market and occupational pamphlets and guides. Examples include pamphlets that "present factual information about women as employers," the apprenticeship system for prospective career training, employment needs of special groups, tips on how to interview, and public and private organizations available to help returning veterans. Most state ES agencies provide guidance-oriented occupational information pamphlets that contain materials relating to awareness of work, points to consider in making a career

decision, entry jobs and career ladders, uses of the DOT and career opportunities in various jobs. Two state ES agencies disseminate occupational guides in both English and Spanish. However, this was the exception. In three states ES personnel admitted to having no or minimal occupational material available for dissemination.

Manpower and Occupational Projections

In 1970, the Manpower Administration, in response to emphasis in Sec. 123(a)(8) of PL 90-576 on the key role of occupational and manpower projections data, drafted a report and analysis letter (RAL 685) dealing with the subject of "Annual Reports on State and Area Occupational Requirements for Vocational Education." This RAL was the product of a Manpower Administration-Vocational Education Liaison Committee and called for occupational requirements and resources information by Dictionary of Occupational Titles (DOT) codes and OE instructional program codes. The content of the report, according to the RAL, is to consist of two statistical tables, one on labor demand and one on labor supply, and an accompanying narrative statement and an appendix. If states have made special studies of future demand projections during the preceding year, they are to report demand according to a format that requires them to report current employment, projected net expansion needs, replacement needs, total needs one to five years hence, and comments by nine-digit DOT codes. Comments are to include indications of the extent to which poor working conditions and/or low wages are causing shortages, the extent to which vacancies are generally filled from within, whether there are significant seasonal variations, and the extent, if any, to which the local long-term outlook may deviate from the 1975 outlook. The supply tables require ES to provide data by nine-digit DOT codes on currently available labor supply (ES job applicants), projected training output from both vocational training and other sectors for one and five years hence, and comments. Finally, the report is to include a general narrative analyzing the occupational situation in the state and the sub-state areas covered by the report.

RAL 685 initiates annual reports for vocational education

Data from our study indicate that three state ES agencies are presently responding to the original intent of RAL 685. Several state ES agencies have ceased publishing the report because of the effort involved and the lack of feedback from state vocational agencies regarding its usefulness. A paradoxical situation was encountered in one state where the state ES prepared essentially two versions of the report, one in DOT code for compliance purposes and the other in a more suitable form for state vocational agency use. In the majority of states, the RAL 685 report has

Most states not preparing RAL 685 reports

been superseded by projection reports based on the industry-occupations matrix methodology and/or interim manpower projections methodology. Reports prepared using these methodologies are based on either Census or BLS occupational codes instead of DOT codes. Although information is included on growth and replacement needs by occupation, the projection periods vary from three to ten years, and none of the projection documents we examined provided either current or projected labor supply information, as called for in R&L 685. Also, several ES agencies did not provide occupational projections on an annual basis as was the intent of R&L 685. Rather, some of the states have adopted the policy of irregular publication of manpower projections dependent upon the availability of resources and user demand for the information.

Because of increasing use of matrix-based occupational demand projections, it is relevant to discuss the situational status of three major DOL employment projection efforts: (1) The National/State Industry-Occupation Matrix System; (2) The Interim Manpower Projections Program (IMP) and (3) The Occupational Employment Statistics Survey.

The National/State Industry-Occupation Matrix System is the "bulkhead" of all BLS projections. This program calls for BLS and the Manpower Administration, in cooperation with all state ES agencies, to develop a set of 51 industry-occupation matrices that are consistent with the BLS national matrix. These matrices are to be developed from Census Bureau tapes which list occupations by industry data for all states and the District of Columbia. Census tapes giving age distribution of the employed, distributed by occupations and sex, are also secured and used by BLS to calculate occupational-specific separation rates for each state. States were to be provided with the software to enable them to alter the base period matrix, update the matrix and/or develop specific sub-state area matrices as desired. Because of methodological limitations, BLS does not recommend that an area matrix be developed for any labor market area less than 250,000 population.

I-O matrix based on Census tapes

The Interim Manpower Projections Program (IMP), as the title suggests, is an interim approach to provision of occupational demand until the National Matrix System becomes fully operational. The IMP Program was ". . . designed to provide detailed industry and occupational employment and manpower requirements projections for States and labor market areas for use in the fiscal year planning cycle." The data output of IMP consists of 1970 employment, 1980 projected employment, estimated 1975 and 1976 employment, and employment change 1970-1980 by industry and by occupation as well

I-O matrix to replace IMP

as average annual job openings due to growth and due to separation. Projections are made for all participating states and for SMSA's of 250,000 or more population. A method is available for projection of occupational demand for labor market areas of less than 250,000.

The Occupational Employment Statistics Program (OES) is a federal-state cooperative program consisting of:

Three major components in OES program

1. a three-year cyclic mail survey covering manufacturing the first year, non-manufacturing (excluding trade) the second year, and trade the third year. Data are currently being collected for between 2,000 and 2,500 occupations and are being used to estimate total employment by industry and by occupation for states and sub-state areas. Thirty states are currently participating in the OES survey;

2. the National/State Industry-Occupation Matrix system as previously described;

3. continuous research designed to improve the quality of occupational employment data for use in manpower and educational planning.

Site visitations and examination of the most recent BS occupational employment publications available at the time of our visits indicated that six states use national staffing patterns to convert employment data by industry to employment by occupations; two states are using state industrial-occupation matrices, and two states have not recently published matrix-based occupational employment projections. Although not explicitly stated, projections in most of the states identified as using national staffing patterns presumably have been derived using the IMP Program methodologies or variations thereof. Of the two states using state matrices, one state is using a matrix based on employment information from OES employer surveys rather than 1970 Census data. Even though the national matrix system and the modified matrix methods of the IMP Program provide for projections for sub-state areas, three of the eight states currently making matrix-based occupational employment projections make projections only at the state level.

Five states making sub-state projections

Seven of the states visited are cooperating states in the OES survey. Five of the states were among the first 10 state agencies to participate in the OES survey. Six of the seven participating states have cooperated in the survey since 1971.

Problems and Needs Encountered

One of the more pressing problems encountered in talking with ES personnel is the perceived decreasing priority being given to manpower data. A rather lengthy quote from an ES administrator seems to put the problem in perspective.

> The problem is that as more and more of the users of labor market information are outside of the agency the weaker . . . the whole labor market information system becomes.
>
> It's very simple. You see, the planning--what little there was--was almost a captive system. Manpower programs were captive in the employment security system, strictly controlled by the Department of Labor.
>
> This is no longer true. A great deal of the manpower systems are outside of the division of employment security, such as CETA. Manpower revenue sharing has put all of this at the local level in these prime sponsor levels. Vocational education is now a big user of data, and it's outside of the system.
>
> With the exception of reporting--required reporting of manpower--all of the users of our data are really outside the system, where they didn't use to be. And yet, the budgeting function and the priorities . . . are still inside the system. All right, you can imagine what's happening. You're really in between a rock and the hard place--the rock being the user, and the hard place being the employment security system that couldn't care less whether the user outside the system gets the data or not. . . . It's the old thing of having to serve somebody--having to serve one party which has nothing to do with the budgeting function--in other words--that doesn't control the resources. I'm not griping. I'm just saying that I think that this is something that you really need to consider--the fact that [the] user makes us change considerably, and yet, the funding is still the same old funding. It's funded through the ES and UI budgets, and they couldn't care less--and I don't blame them.
>
> If I were the Assistant Director of ES, you'd have to do a lot of hard selling to show me how labor market information helps me make placements. Now it sounds great, and those guys up in Washington believe this junk, but the ES directors out in the states, they couldn't care

Decreasing priority given to manpower data

less about funding R & A positions for labor market information. It's just that simple.

This comment was not an isolated incident. Staff cutbacks and a shortage of trained personnel are viewed as a pervasive problem in nearly all state ES agencies. In one state ES agency, the number of funded staff positions in R & A had been reduced from 34 to 27 at the same time the work load was judged to have increased "considerably." Another state cited as evidence of their lack of resources for the production of manpower data the fact that currently there is only .7 of one full-time position allocated by the Manpower Administration to the entire Industry-Occupation Matrix System and only 6.5 professionals out of an ES staff of over 2,000 allocated to the entire OES effort. Given this situation, the ES administrator admitted, "There is nothing further we can squeeze out." He indicated that not only could nothing more be done, but that the agency is having to cut back on what it is currently doing. Evidence of cutbacks in another state as a result of budget reductions and changes in priorities included discontinuance of a job information series publication used by vocational education planners and guidance counselors, reductions in the number of "Career Day" presentations to local high school students, and inability to provide up-to-date occupational guides to school counselors as they once were able to do.

R & A staff positions decreased while work load increased

Fewer services provided to educators

The Comprehensive Employment and Training Act (CETA), which provides for non-categorical funding of manpower programs to local governmental prime sponsors, has had a considerable impact on both the organizational and operational focus of state ES agencies. The initiation of CETA with its associated decentralization and decategorization has made it a "matter of survival" that ES communication and effectiveness be improved. CETA legislation is seen as having placed considerable emphasis on political and governmental lines as opposed to job service, making it "all the more mandatory" that ES agencies redirect their thrust toward the selling of their services to the employee, the employer, and state and local governmental officials. While ES agencies stand prepared and willing to avail prime sponsors of the traditional job services mandated by the Wagner-Peyser Act, they are also well aware that prime sponsors are free to contract with other agencies for the delivery of these services. It is the avowed intent of at least one ES "to exert all . . . energy to keep these situations to a minimum."

CETA makes ES a seller of services

The possibility of duplication of job development and placement activities has caused several ES agencies to invest themselves with a new look through increased public relations. The basic mission of the ES agencies contacted in this study is job placement, with primary emphasis on improving the quality of these services and the number of individuals

Job placement services given top priority

served. Importance is attached to improved use of the services by employers and job seekers, encouragement of prime sponsors to utilize local employment service offices as the central agency for all manpower projects, preferential services to veterans and handicapped and expanded services to rural areas. Consonant with this mission, the prime purpose of manpower activities is considered to be the provision of information that will contribute to improved performance of the placement function. While the role of labor market analyst includes cooperation with local office managers, employer relations representatives, and job market specialists, as well as the utilization of data provided by the Research and Analysis section, BLS, and other special studies which will improve the quality of labor market information at the local area level, some ES agencies appear to be making "every effort . . . to curtail staff efforts in areas of low priority manpower information."

Several allied problems were mentioned that exacerbate problems of scarcity of resources and uncertainties about the future implications of CETA. Higher unemployment rates in all states are forcing ES agencies to divert scarce resources from other functions including manpower projections to meet the increased demand for processing unemployment claims and the associated need for job placement services. With regard to financial resources, ES personnel reported difficulty in earmarking funds for special purposes, e.g., manpower data. One director of R & A activities indicated that there is no way of checking within the organization to ensure that budgetary allocations are being spent for the purposes intended. Several R & A directors told us that research activities are the first to feel the effects of any "belt-tightening" within ES. Lack of guidelines within the state for the expenditure of funds, therefore, reduces the likelihood that increased resources will be allocated and expended in the production of manpower data, especially that manpower information required by vocational education.

Higher unemployment rates divert resources from R & A

The problem is compounded by the fact that vocational education as a consumer has special information needs. Vocational education, because of its usage of manpower data in the preparation of state and local plans, requires relatively current manpower demand data. Demand information collected in 1971 and published in 1974 is of diminished utility to vocational educators, especially in times of a rapidly changing economy. Unlike the employer and other industrial-oriented clientele, vocational education requires manpower demand projections by occupational rather than industrial categories. Furthermore, vocational education frequently requests that manpower data be provided for small areas such as multi-county regions, counties and sometimes school districts. One of the most frequently requested manpower

Vocational education has unique data needs

demand data for vocational educators' program use, especially at the local level, is occupational information for guidance and counseling purposes.

Because of costs involved, ES agencies are often unwilling and unable to devote the resources required to meet these needs. In many instances the ES agencies are not in a position, because of conflicting priorities and lack of budgetary control, to divert scarce resources to the provision of the manpower data required by vocational education. They have neither the personnel nor the occupational techniques to provide timely and accurate manpower data at the level of geographic and occupational specificity required. Furthermore, many are unwilling to make the commitment of resources because they feel that the additional information, even if provided, would not result in improved vocational program offerings. One of the reasons given is that many of the occupations included in ES reports are not entry-level positions.

Limited ES resources restrict services to vocational education

The single most sensitive issue regarding the provision of services to vocational education is shared costs. In the majority of states visited, the state vocational agencies do not transfer funds to ES for services received even though there may be added costs involved in the provision of these services. Since the manpower information requested by vocational education is of peripheral assistance in meeting many of employment security's needs, they see little immediate return from the allocation of their resources to the immediate satisfaction of vocational education demands.

Vocational education not paying for added costs

In some cases, the provision of placement and supply-demand manpower information to educators is seen as working at cross-purposes in that ES responsibilities are being supplanted. Provision of manpower data by at least two ES agencies, in answer to requests from state vocational MIS personnel, has resulted in the duplicate publication of manpower demand projections. Data on job vacancies obtained by employer surveys conducted by vocational education and provided to vocational students were seen by ES personnel in one state as a "blurring of the responsibilities of the two agencies." ES personnel reported a lack of understanding on the part of many educators of the purposes and priorities of ES. The Office of Education was thought to have perhaps contributed to the situation by suggesting that ES agencies have large pools of available manpower data of use to vocational educators. In this regard, it was felt that the Manpower Administration is not always aware of the pressures placed upon ES by vocational education's pressing needs. Since most of the programs in ES are mandated by federal rather than state agencies, the feeling was that little improvement can be expected if "we get no help."

Duplication of efforts

ES feels national offices unaware of their situation

The manner in which the state ES agencies have accommodated the above problems varies across the spectrum. One state vocational agency respondent, in response to a question on working relations with ES, commented,

ES agencies vary in their responsiveness

> They have done anything that we've asked them. We've said "This data isn't any good to us this way. It's got to be by OE code number" and they've made their switch, adjusted, and come to us with OE codes.
>
> Then we said, "It's no good statewide. We've got to have it by local agency or by district." So they've come up with this kind of data which is exactly the way we need it.

In contrast, another state ES agency provided no special processing of their manpower data before passing it along to vocational education. Their position was, "If we have it, you can have it--warts and all, no special refinement." The point was made concerning provision of data to vocational education that ES is ". . . not set up to run vocational education schools." While these two positions represent the extreme, most ES agencies are attempting to improve their offerings of manpower data subject to the constraints imposed by scarce resources and shifting service priorities.

Problems cited concerning OES surveys

Several of the states are behind schedule on their OES surveys. With a limited number of professional positions, one state found it barely possible just to push through a survey, get it back, and get a "clean data file" back to Washington. A Research and Analysis director told us that "if we just keep the [OES] effort alive, we'll probably be doing good." Failure to include the self-employed and the inability to get a representative sample of professional people were seen as creating a gap in the data. Problems with employer response were also noted; some large employers reportedly are complaining about the considerable manual effort required to complete the forms.

Problems cited concerning 1-0 matrix

Problems associated with the National/State I-O Matrix System center on its limitation to geographical areas of 250,000 population, non-standard occupational classification, processing responsibilities and lack of resources. It was reported to us that BLS does not recommend that the System be applied to sub-state areas below 250,000. The problem seems to be due to the state-of-the-art of matrix projection methods. BLS has confidence in state-wide and large metropolitan projections but not in smaller area projections. Problems of occupational classification arise from the fact that there is currently no standardized, generally accepted

occupational classification scheme. Occupations are now alternatively classified by the Census codes, by DOT codes, or by BLS codes. The Office of Management and Budget is working on a standard occupational classification system. However, a great many additional problems are anticipated since a standard classification will make all currently available crosswalks between existing systems obsolete, will limit the utility of historical data because of incompatible occupational definitions, and will generally require the revision of current forms and reporting requirements. Some misunderstandings have arisen about processing responsibilities. One state understood that originally BLS was going to develop the state I-O matrices for interested states, help them install the components, and help provide maintenance for them. Recently, Manpower Administration has advised the state ES agency that the installation and maintenance of the I-O matrices would be a state responsibility. To date, this state ES has not gone ahead in operationalizing the state matrix. One ES respondent felt that BLS methodological constraints were not necessarily compatible with the needs of their state. He felt that it would be better if the state had the BLS software and could modify it to be compatible with the state planning needs. However, it was recognized that additional resources would be required before the state ES could assume operational responsibility for the matrix system.

BLS assistance highly regarded

Almost universal agreement was expressed by ES personnel regarding the high quality of BLS regional assistance. There was, however, a feeling that the work load of regional BLS offices appears to be too great to allow their staff to be broken loose for additional data processing. One ES respondent reported that data are current when they are sent to the regional office for processing, but by the time they are processed and returned to the states the data are too old to be of any use for educational planning purposes. Both Manpower Administration and BLS were seen as providing guidelines that could be most useful to ES agencies, but these guidelines all require personnel resources to implement them. Since no additional funds are provided, the guidelines are of little value in that they cannot be implemented with existing resources.

ESARS not useful to educators

The Employment Security Automated Reporting Systems (ESARS) was generally viewed as being of little use to vocational educators. Since ESARS was designed for internal agency control and reporting, its format was considered too detailed and cumbersome for practical application by educators. They are generally welcome to use the data, but most state ES agencies are making no effort to inform educators about it or what is in it. One state ES respondent maintained that the ESARS is not compatible with other information systems. Apparently, the information on manpower

program applicants reported by ESARS depends, in part, on the program the applicant entered. Some programs were reported to have non-standardized definitions for the same applicant characteristics.

More cooperation needed between HEW and DOL

With regard to educationally related needs expressed by ES personnel, more cooperation was suggested between HEW and the Department of Labor at the national level regarding precisely what education wants from the Department of Labor in terms of occupational projections and other manpower data. Priorities could then be set at the national level and states could respond. A clear delineation of the responsibilities of ES agencies with regard to education is desired. Such a statement is considered not to be in existence at the present time. Furthermore, many ES personnel felt it incumbent upon education to state clearly the uses to which manpower data are to be put in vocational education planning. If ES labor market analysts clearly understand the educational purposes for which they are collecting, analyzing and publishing the data, the task can be simplified and dissatisfaction minimized. ES could then more easily express the specific limitations of the data for each given purpose, thereby adding to vocational educators' confidence in the data. The need was frequently expressed by ES respondents for national cooperation between HEW and DOL that would not simply result in another RAL 685 with no additional funds, no staff, no clear direction and just a vague directive mandating cooperation without any consideration of what the practical implications would be. Categorical funds are needed for the provision of specific data for vocational education which would enable analysts to direct attention at specific target problems identified by education. Substantive needs expressed by ES personnel were for special Census data printouts; more detailed occupational information by locality; more sophisticated projection techniques than many of the simple linear regression models currently being used; funds for special projects; better computer analysis programs, technical capabilities and facilities at the state level, particularly for occupational projections; and better supply data to assist in effective supply/demand matching for vocational educators.

Vocational education should make its needs explicit

Local ES Offices

Relations with Vocational Education

Diverse formal arrangements between ES and vocational education

As one ES person told us, the local level is ". . . where you find the really cemented effective relationships." These relationships were found to be both formal and informal and to vary considerably both within and between the states

visited. Formal continuing organizational linkages generally occur through local boards/committees. Managers of local ES offices sit on high school, community college or county vocational advisory boards in several states. In at least one instance, the director of the local ES office is a member of the county school board. Occasionally, both vocational education and ES are represented on the local area manpower planning councils. One ES office is jointly involved with vocational education in CETA institutional training and has from 14 to 300 referral slots to fill in local schools. A local vocational director serves on the ES oral examining board for civil service positions in another area visited. Manpower skills centers are operated by local ES personnel in one state. In another, ES personnel hold positions on various policy boards and committees, as well as being outstationed on the skills center premises where they perform intake, testing, counseling and placement activities. In several states, ES counselors and school guidance counselors are cooperating in area high school programs designed to help non-college-bound youth. One locality has a cooperative program using outreach teams consisting of a school counselor, school work training specialists, an outreach specialist from CBO and an ES job development and placement specialist. Several local ES offices reported having hired school counselors to work in the ES office during the summer months. For the most part, however, the bulk of the contact between vocational education and local ES personnel occurs on an informal basis. Telephone and personal contact is the most frequently used informal communication media.

Most contacts informal

Services Provided

Services provided to education by local ES offices visited can generally be classified as individually-oriented job services and agency-oriented labor market information. Job services far outweigh the labor market information services.

Job services more frequent than labor market surveys

Job services provided by local ES offices vary considerably. Several offices reported they either currently have or did have at one time a part-time counselor outstationed in local schools. These counselors provide information on occupations and job openings, test students and counsel them on career choices, register the seniors and seek to place the non-college-bound graduates. Contacts with students vary from informal talks given at student assemblies to formal Career Day activities replete with booths manned by ES personnel and equipped with audio-visual aids, pamphlets, kits and other materials. Some ES offices offer job orientation services to students which

ES services in the schools being curtailed

include mock interviews, tips on how to interview for a job and prepare resumes, and advice on how to go about finding a job. Testing and counseling of public school students using the GATB are occasionally offered. These services may be provided at the school. However, outreach services are being curtailed because of budgetary cutbacks. Some offices reported that they encourage high school counselors to bring students to your ES offices before graduation. At least one office described a "self-help center" located in the ES office. Several local ES offices send job bank listings of job openings to high school counselors for their use in placement.

Services publicized in various ways

Local ES programs and services are publicized in a variety of ways. The majority of offices depend primarily on radio, newspapers and television. A few supplement these more conventional modes by posters displayed in schools and stores, pamphlets stuffed in grocery bags and announcements made to community service agencies. Whereas the above are exemplary of the more innovative practices described to us, other ES offices appeared to be making no special effort to serve the public school clientele.

Educators' requests for data are infrequent and varied

Nearly all of the local ES personnel indicated that they have access to, and would disseminate upon request, the manpower data routinely published by the state ES. However, many local ES offices noted that they receive relatively few requests from local schools for manpower data. Typical of those requests received are job guides for students; local job vacancies; occupational needs; new developments; current labor market prospects; unemployment by occupations; labor market data; occupational trends and projections; training program locations and information; population growth; wage and salary data; information on CVT opportunities; requirements for various occupations; current welfare information; number of veterans seeking employment; minorities in the work force; and assessment of feasibility of occupational program offerings, e.g., horticulture, floriculture, and dental hygienics. For the most part, local ES offices reported that they are able to meet most of the local educational requests for data. If the requested data are not available at the local office, frequently they are available from the state ES. Local schools were seen as not asking so much for manpower data *per se* but for specific program relevant information that can be extracted from the data. Educators seem to be seeking answers to specific questions rather than the manpower data itself for purposes of general analysis.

Educators seek answers to specific questions

Few local offices produce localized publications

Few of the local ES offices have the resources to collect, compile, analyze, publish and disseminate local manpower data. One office visited publishes a monthly local labor market newsletter and disseminates 200-400 copies to

employers, community groups, labor unions, trade associations and schools via a mailing list and requests. Only one of the local offices visited reportedly has the capability to modify the state industry-occupation matrix to reflect local conditions. Other offices reportedly have conducted area wage surveys, job availability studies and special studies and surveys upon request. Few offices reported that they would respond to vocational education requests that require special data tabulations. Several offices told us that the monthly ES-202 printouts are useful in providing answers to questions about their service area. Some offices made reference to unpublished or limited distribution data concerning job availability, plant expansion, prevailing wage rates, contract prices and other information that might be of potential utility for educational planning. Apparently, the local ES offices are reluctant to release this information because of the possibility of source disclosure which would violate their confidential agreements.

Perceived Problems and Needs

The problems at the local level parallel those at the state level--decreasing resources and lower priorities given to manpower data because of increased emphasis on the placement function. As one local ES person told us, "The Department of Labor has arbitrarily cut back on labor market information. Budgetwise they've cut out the staff on that, and we've had to bootleg the staff we used to get--we felt it was important enough that we did bootleg it." This office felt that it is inconsistent of DOL to propagandize "Go to your local labor office and get the latest labor market information" while simultaneously reducing the budget to a very low priority. Local ES officials universally felt that they are not receiving adequate funds to do anything but the basic work of the agency. Required functions were reported increasing without a corresponding increase in staff size. Lack of discretionary funds at the local level was specifically mentioned. One official stated,

Placement responsibilities curtail production of manpower data

> I think all this discretionary money is kept in Washington and in the regional office. I don't know why the Secretary of Labor should keep it not the regional director. Maybe the state can siphon-off a little, but never any discretionary money comes to the local area. If it comes through the local government for any discretionary funds for use here, we don't get it.

No discretionary funds at local level

Lack of funds has reportedly caused local ES offices to cancel or reduce the scope of a number of services offered to the public schools. Dissemination and updating

Lack of funds reduces services to schools

of job guides, which are one-page summaries of a specific occupation and include a description, outlook information and wage and salary data, have been curtailed or eliminated in several offices contacted. No funds were reported available in one office to continue the out-stationing of counselors at the high schools to provide counseling and placement for seniors who are not going on to postsecondary education. As one ES office recounted,

> . . . at one time, we used to have a person who had responsibility for the schools, sort of a school vocational counselor who would correlate with the schools. This position, of course, has since been moved back into the office due to the work load that was of more prime importance.

The one local ES office which was modifying the state industry-occupation matrix for local use had to stop the effort because of lack of funds. Many local ES offices consistently claimed that they do not have sufficient resources to customize data reports for vocational education nor can many ES offices honor requests for special surveys. Other offices reported the necessity to reduce aptitude testing, job orientation and placement services offered to local high schools. Some offices used to visit routinely all local high schools, but they now offer services to those schools only upon request. Reductions in travel budgets make the continuation of school visitations in these offices problematical.

Cannot honor requests for local surveys

The prime role of local ES offices is placement. Their function includes intake, carry-in, new applications and renewals, counseling, testing, orientation, training and retraining and placement. Placements are of importance because the operating budget is in part a function of placement. One local ES respondent candidly admitted that,

Placements determine operating budget

> . . . the emphasis right now for our survival is on placements, and you can't separate placements from anything we've talked about today. This is where we get knocked when we get a reduction in budget or force. They hit into our ES staff which gives us less people to do more projected work. They say, "Well, you've done great this year. Next year you've got to raise your sights and do this much more, but you won't have so many people to do it."
>
> We're going to reach a point of no-return where you can't have less people do more work indefinitely. There's a cutoff point somewhere, and placement is woven all through these services that we give to the schools. That's the purpose . . . to get a person through this vocational training.

> vocational information, labor market information--it's all tied into getting somebody on the job.

As indicated in the above statement, collection and dissemination of manpower data at the local level are primarily geared toward the improvement of the local ES office's performance as a placement agency. Activities such as providing counseling, testing, job orientation and training in how to seek employment generally have not resulted in large numbers of placements considering the amount of ES staff time invested. With increasing emphasis on placement as the ultimate criterion of effectiveness, these service activities tend to be discontinued. Higher priority is given to the coordination of employment services with CETA informational needs which enhance the competitive position of local ES offices as bidders for CETA funds. Prime constituencies are employers, community groups, labor unions and trade associations. A close communication is maintained with community agencies and local Chambers of Commerce to supply them with specific labor market information for the purpose of predicting economic growth and encouraging plant locations.

CETA informational needs given priority over educators'

A particularly irksome point with local ES agencies is the schools' assumption of the placement function. A reoccurring complaint was that school placement offices are "creaming" the better vocational students and leaving the local ES offices with the poorer ones who are harder to place. Local ES offices frequently are reluctant to provide schools with lists of job vacancies for fear that students will be placed by the school and not through a local ES office, thereby depriving ES offices of placement credit. Schools are criticized for waiting until late spring or early summer to register graduating students for placement. Duplication of services was seen as an unnecessary and inefficient expenditure of resources. In one state, a computer-assisted placement service for local school use is being developed for the benefit of employers in need of trained manpower and for occupational program graduates who seek employment. In another state, a group of vocational schools is developing the equivalent of the JOB MATCH system--a computerized system that matches applicant characteristics with the requirements of vacant jobs. Local ES offices expressed dissatisfaction with the assumed use of federal funds by local schools to employ coordinators who spend their time in the field with industries and employers in job development and placement activities. In one case, a cooperative program between area vocational-technical schools and ES for testing and placement was discontinued when the vocational schools hired their own coordinator. This function was interpreted by the local ES office as duplicative of services already available.

School placement offices seen as competing with ES

Duplication of services seen as inefficient

Causes cited for lack of school involvement

With few exceptions, most local ES offices are concerned about the limited use of ES services by vocational educators and their tendency to view ES as something of a "last resort." They attribute the lack of school involvement to (1) time required to find employment through ES channels, (2) school perception that the quality of placement is better when the person responsible for placement knows the student, the program and the needs of local employers, (3) the belief that local ES offices handle only the lower skilled and less desirable jobs, (4) the low priority placed on the use of manpower data by local school personnel, (5) lack of ability of local school administrators to use manpower data in program planning and operations, and (6) lack of awareness of available ES services.

Better public relations needed

With respect to lack of awareness as a problem, a local ES respondent characterized data dissemination to employers, users, and local leaders as "inadequate" and service dissemination to the public, potential job applicants and employers as "woefully inadequate." Since this is a bread-and-butter area for the employment service, he felt that they should be doing a better job in dissemination and public relations. He expressed a desire for a program similar to the one in another state where special grant funds are available to pay for local media and other advertising designed to boost the publicizing of ES services.

Local offices not always aware of state ES publications

Most of the local ES offices reportedly disseminate upon request manpower documents published by the state ES agency. However, not all local ES offices are knowledgeable of every manpower publication available from their state ES agency. One local office manager admitted:

> Well, I've got to say in all honesty, there's probably a lot of things that the state [ES] has that we're not aware of. I've found this out in recent months by querying for information, and [I] find out that I come out with some pretty good information that they provide me. So I think perhaps some of us local office managers, perhaps, don't ask as often as we should. We'll try to dig it out when it may be already available and out [released].

Local dissemination restricts feedback to state ES

One local ES office recently received a list of labor market publications available from the R & A section of the state ES agency. It was pointed out to us that local dissemination of manpower data creates a problem in that the state is dependent upon feedback from the local offices on how well the publications are meeting local demand for information. In the absence of feedback from the local offices, the state ES agency is deprived of knowledge about the utility of their publications and the needs that are not

being served by current publications. Decentralized dissemination also creates the possibility of duplication of effort in that requests from the local schools are frequently made directly to the state ES. Unless the state office routinely returns requests back to the locals, the state offices are providing both local clients and local offices with manpower publications.

Labor market analysts needed in local offices

Expressed needs of local ES personnel pertaining to vocational education usage of manpower data centered on ways of obtaining good information and means of disseminating it to local users. One need expressed in several states was for a labor market analyst to be attached to local ES offices, or in one instance, to a regional office. It was felt that an analyst could be used to establish more personal relations with local educational agencies. Also, the presence of an analyst would allow local ES offices to make more detailed analyses of ES programs, particularly evaluative analyses of placements, selection, and other employment service programs. Needs pertaining to dissemination include: the preparation of a catalog of all available state ES publications with a descriptive narrative that would be written in "laymen's terms" for ease of understanding; advisories on all forthcoming ES publications; periodic news releases by the state ES agency informing the public of recently acquired information; identification of one person in each local ES office as the contact person for vocational educational personnel; local committees of diverse groups called together to discuss manpower needs and the use of manpower information in comprehensive manpower planning; and education and ES personnel sitting down and discussing ways to eliminate duplication of services. Finally, there was a plea representing the common bond among all dedicated agency people who feel that their primary mission is human service rather than strict adherence to rules, regulations and guidelines:

Dissemination could be improved in a variety of ways

> I think recently there's been quite a bit of pressure--I think everyone's been under a lot of pressure--because it seems like we're expected to do more and more, and if you were doing a full job before, more and more, you know it's frustrating especially if you are a conscientious worker.
>
> About the only thing--if you ask me how I would like to see it improved--I'd like to see the paperwork cut out. Sometimes I dream about paperwork, that I'm just being smothered. I don't think that's new--everybody, I'm sure, would agree with that--and I'd like to see perhaps a little more time to do a more thorough job--what I'd call a thorough job.

CHAPTER V

THE ROLES OF USOE, BLS AND MANPOWER ADMINISTRATION REGIONAL OFFICES

Summary Observations

USOE Regional Offices

- Before a state can receive its allocation of federal funds from Vocational Education Acts, its state plan must be reviewed, recommended for approval by the regional U. S. Office of Education and formally approved by the U. S. Commissioner of Education in Washington, D. C.

- Providing assistance to the states is the prevailing philosophy expressed by Occupational and Adult Education personnel in the regional offices.

- Decisions concerning the quantity and quality of vocational education programs are considered to be state and local concerns; the autonomy of the states is respected.

- Manpower data contained in state plans are not verified for accuracy by regional USOE personnel.

- USOE regional offices do not generally acquire and analyze manpower data for use in state plan review.

- Few contacts concerning manpower data are made with regional Department of Labor personnel.

- Personnel in the Occupational and Adult Education divisions of the regional Office of Education feel they do not have enough staff to adequately fulfill their responsibilities.

BLS Regional Offices

- Vocational educators make few requests for BLS publications.

- BLS regional offices have few if any formal arrangements for communicating with educators.

- No categorical funds are made available to BLS to prepare special data tabulations for use by vocational educators.

- Many BLS personnel feel that the funds authorized (but never appropriated) under the VEA of 1968 should be made available to BOL to pay for the services vocational educators request.

Manpower Administration Regional Offices

- BAL 665 is not highly regarded by manpower administration personnel, nor do most state ES agencies comply with the recommendations contained in it.

- USOE has not provided any federal funds from the VEA of 1968 for special data-related services from Manpower Administration.

- No formal procedures exist for working with vocational education personnel at the regional, state or local levels.

- The opinion was repeatedly expressed that there can be little hope for improvement in communications with vocational educators or special services provided to them unless the educators are willing to finance the costs of such services.

The Role of USOE Regional Offices

In order for a state to receive its allocation of federal VEA funds, its state plan must be reviewed and recommended for approval by the Occupational and Adult Education division of the regional Office of Education and formally approved by the U. S. Commissioner of Education in Washington, D. C. During the course of the present study, interviews were conducted with regional USOE personnel in each of the ten federal regions. In most cases interviews were conducted with the director of the Occupational and Adult Education division and one or more staff members who were most familiar with the state plan review process. In two regions only the director of the division was interviewed.

Authority held by separate commissioners

While each of the ten regional Offices of Education has a regional commissioner, the director of the division of Occupational and Adult Education also reports directly to the Office of Education in Washington. Administrative authority for the regional divisions of Occupational and Adult Education is held by the regional commissioner; however, programmatic authority is held by the Deputy Commissioner for the Bureau of Occupational and Adult Education in Washington. Thus, the regional directors of the occupational education divisions operate under the authority of two different commissioners.

We were told that the direct delegation of programmatic authority from Washington came about in 1972 when the National Advisory Council on Vocational Education challenged the assignment of responsibility for Part D of the Vocational Education Amendments of 1968 to the regional commissioners. As a result, it was decided that the Deputy Commissioner in Washington would be allowed to delegate his programmatic authority to his own staff but not to the regional commissioners

Approval process in regions and D. C.

The ten regional divisions of Occupational and Adult Education vary in size from two to ten professional staff members. One of their primary responsibilities is to review the annual and long-range segments of the state plans for vocational education. After a state plan is reviewed and recommended for approval by the regional division of Occupational and Adult Education, the plan is sent to the Deputy Commissioner in Washington and forwarded to the U. S. Commissioner of Education for final approval. When the Commissioner approves the plan, it is transmitted to the responsible person in the regional office who in turn transmits a signed copy to the state. Thus, the review process and recommendation for approval are performed in the regions, and final approval takes place in Washington.

Assist states in plan preparation

State plans for vocational education are normally submitted to the regional offices by June 30th. During the preceding months regional USOE staff members generally work with the states to assist them in the development of their plans. This is done to ensure that the plans submitted to the regional offices will comply with federal regulations. Typically, the states submit draft copies of their plans to their regional offices well in advance of June 30th so that the plans can be reviewed, modified and resubmitted in an effort to ensure that they will be in substantially approvable form prior to the June deadline.

Regional directors of Occupational and Adult Education divisions expressed similar philosophies concerning their roles in assisting the states in planning for vocational education. As one director described it,

Philosophy of assistance

> Our main priority is to assist the states in any way we possibly can to help them have a better program . . . . I would say primarily we're trying to follow through on the intent of Congress as expressed in the Purpose of the Vocational Education Amendments of 1968, which states that people of all ages and all parts of the states are to receive quality education in line with their needs.

This philosophy of assistance was clearly differentiated from an inspectorial or dictatorial role. Federal support for vocational education was not seen as being a justification for federal determination of local programs. While there was unanimous agreement among the regional directors that the state plans must comply with the provisions of the Acts and federal regulations in order to be approved, there was no implication that such compliance meant strong federal intervention. To the contrary, we were told that most decisions concerning vocational education are clearly a state and local matter. In the words of one regional director, "We have state autonomy in this country in education and we believe in it. Education is really a local concern, and of course the Constitution says this is a state concern."

State autonomy cited

Review of State Plans

Stress compliance with federal standards

The review of state plans by regional divisions of Occupational and Adult Education follows a 45-page standardized checklist issued by the Bureau of Occupational and Adult Education. We were told that the checklist only ensures compliance with federal standards, and in order for the plan to serve as a meaningful planning document the state must develop a plan that goes beyond mere compliance.

Table 1 in Part II of the state plan is a summary of projected labor supply and demand for the next one and five years. The suggested format for Table 1 is presented here. According to the guidelines for reviewing state plans, program codes are required in only 2-digit OE codes, which generally results in a minimum of seven major program classifications: Agriculture, Distributive, Health, Gainful Home Economics, Office, Technical, and Trades and Industry. For the ten states visited in conjunction with the current study, the number of program categories listed in Table 1 of their state plans is as follows: 7, 7, 7, 7, 46, 72, 95, 98, 116, 280.

No verification of manpower data in plans

In their review of state plans, none of the regional divisions of Occupational and Adult Education systematically verifies the manpower data contained in Table 1 of the plans. In general, no manpower data are available within the regional offices that can be used to verify the data in Table 1. Furthermore, for those plans which do not go beyond 2-digit OE codes in their program specificity it is virtually impossible for the regional office to verify independently the accuracy of the data by comparing them with data from other sources. In part, this results from the previously discussed difficulty of matching program codes with occupational codes. When the programs are listed in only 2-digit OE codes (e.g., Agriculture, Health, Technical, etc.) the program-occupational correspondence is extremely vague. The four state plans which use 2-digit OE codes in Table 1 do not list the occupations on which their projected needs figures are based, since they are not required to do so to have their plans approved.

Two-digit OE codes insufficient

State autonomy and lack of data are major factors

Two reoccurring explanations were given by regional personnel regarding their general acceptance of the manpower data reported by the states in Table 1 of the state plans: (1) the states are in a much better position than the regional offices to know what their manpower needs are, and (2) the regional offices do not have the staff time to systematically verify the data contained in Table 1 in the state plans. While several regional directors stated that they occasionally ask the states for further clarification of their projected needs, the following comments reflect the positions generally taken by the regional offices:

> How can we second-guess the states relative to . . . what data did you review in order to make your decision?

> Any data that we would have would be completely outdated. They [the state and local educational agencies] have got much more up-to-date data than we would have.

Table 1

EMPLOYMENT OPPORTUNITIES RELATED TO VOCATIONAL EDUCATION PROGRAMS

LABOR DEMAND AND SUPPLY SUMMARY 1/

State _____ Fiscal Year Ending June 30, 1973

OE Code 2/	Instructional Program	Current Employment	Projected Expansion and Replacement Needs 3/		Projected Labor Supply			
					Vocational Education Output 4/		Other Sectors Output 5/	
			1973	1977	1973	1977	1973	1977
	TOTAL							

1/ Data from Employment Service and from other sources.

2/ List in numerical order by broad occupational category (2-digit code) and by instructional programs within categories (6-digit code). Subtotal by 2-digit codes.

3/ Include only total expansion and replacement needs; not total employment figures.

4/ Number trained through vocational education programs available for work to meet labor expansion and replacement needs.

5/ Number trained from all other sources available for work to meet labor expansion and replacement needs.

> It all comes back to really a matter of analyzing local data in terms of local needs. How can we at the regional level or at the state level provide data that's going to be more appropriate than what's available to the local people?

The ability of the personnel in the regional offices to verify systematically the manpower data provided by the states is further restricted by their limited number of staff. Seven of the regional offices have five or fewer professional staff members to perform all of the assigned responsibilities of the division, and usually only one or two staff members play an active role in the review of state plans. A director from one of the larger regional offices commented,

Limited staff time

> We do not have the manpower or the resources to go out and verify that the data they [the state vocational education agencies] are giving us is accurate and valid, so we rely pretty much on the data they give us in their needs assessment to determine whether they are addressing themselves to the manpower needs.

Likewise, a director of one of the smaller offices stated,

> We are in no position to check details or specifics unless something is out of the ordinary.

The most frequently mentioned procedure for checking the data is to compare the data in a state's current plan with the data provided in earlier plans. Any large discrepancies in the data from year to year are likely to result in requests for further clarification. The converse of this was also noted; that is, questions are raised if the manpower data do not change over a period of several years. For example, one director reported that a 1974 state plan was returned to the state for updating because it was using 1960 Census data.

Verify data using earlier state plans

USOE Relationships with State and Federal DOL Agencies

Communications between USOE regional personnel and personnel from state employment security agencies, regional BLS offices and regional Manpower Administration offices range from occasional to nonexistent. None of the personnel

Limited communications with data suppliers

in the regional divisions of Occupational and Adult Education regularly receive manpower data from these state and federal agencies, nor do they regularly use data from these sources in their reviews of state plans.

With regard to state ES data, the prevailing attitude was that it is up to the state educational agencies to contact their state employment security agency for data that could be used in vocational education planning. Several regional directors said they felt it would be inappropriate for them to contact a state employment security agency; if they want data from a state ES agency they request it through the state director of vocational education:

> We don't set up a network [with the state employment security agency]. We try to work totally through the state director. When we come into the state we notify him.

> We don't get [manpower data] from the state employment security agencies. Now they may send us some information from time to time, but we don't solicit it and we don't have a regular system to follow on that.

State autonomy inhibits direct contact with ES

State and local autonomy in programmatic decisions was cited as one reason for the regional office's reluctance to gather ESC data which could be used to question the data contained in the state plans. One regional director described the following scenario:

> Supposing they [ESC] tell me [a program's not needed]. Am I supposed to go back and tell them locally, when it's really their decision? Or am I supposed to knock it out of their budget because of the figures from ES? They [the locals] are going to come back and question ES's figures. So why go through all this hassle? In other words, I'm supposed to knock it out of their budget, create all these problems, have the mayor call me up or somebody else asking why this budget wasn't approved, on the basis of some statistical data that may have been taken three or four years ago by ES.

Little faith in published data

The regional director of Occupational and Adult Education in another region described the general lack of reliance on employment security data as follows:

> One of the things that I've found is that there's a great reluctance on the part of people to put much faith and reliance on the employment security data . . . . But I think it's getting better. I think there's a closer working relationship now [between ES and educational agencies] than there was, say, five years ago.

In terms of what they would like to see coming from state employment security agencies, the following comments by one respondent reflect the comments given by several regional directors:

Prefer trends over statistics

> I am more and more of the opinion that the manpower data we need to plan is that which would indicate trends to us rather than specifics. I don't think we can ever get into the position in vocational education to where we say we have two hundred openings or a need for two hundred people in an occupation and we're going to train two hundred people to meet those two hundred slots. I just don't think that kind of system is ever feasible. But I do think that if we have information that shows that the trend of jobs is shifting from, let's say, agriculture to public service, or that these kinds of trends and directions are taking place, then I believe we can plan to meet those changes in trends and directions. But I'm afraid that sometimes we get hung-up on numbers and trying to be so darn specific, and sometimes when you do that you end up with numbers that really don't mean anything.

Communications between regional USOE personnel and regional Department of Labor personnel tend to be infrequent and informal. While few regional USOE personnel cited any specific barriers to better communications, several noted that there is a traditional distrust between education and labor at the regional, state and local levels. Some of this distrust has its roots in the competition which exists between these major agencies for large segments of the training and educational activities. It was pointed out that educational agencies had worked very closely with Labor personnel in matters concerning MDTA, but with the enactment of the CETA legislation and the operation of CETA programs, educators have been virtually ignored.

Need better communications with DCL

Improvement in communications between the regional USOE and BLS offices was considered almost universally to be needed. Communications were described as being only occasional, informal, and in a few cases nonexistent. Most of the regional USOE personnel felt that strengthened communications between these two major agencies would be extremely helpful in promoting the development of data more useful to educators. However, a residual resentment would have to be overcome. Several of the regional directors of Occupational and Adult Education reported that they have already lost positions within their offices because of changes in the federal legislation which shifted most of the MDTA activities to CETA. One regional director expressed the situation succinctly when he said, "Losing positions in one's office doesn't sweeten at all the attitude we have held over the years in connection with the Labor Department and its regional activities."

Reduced staff due to CETA

The USOE staff cuts which indirectly resulted from CETA have placed the regional divisions of Occupational and Adult Education in a position where the acquisition and review of published manpower data are seen as time-consuming activities which cannot be given high priority. One regional director described their position as follows:

> If we had the manpower--you see, right now I've got one person to handle the whole program of vocational education, with millions and millions of dollars of funds going into the states: the Part D, the Part F, the Part C, the regular Part B, the disadvantaged, the handicapped, the co-op ed., the consumer and homemaking education, teacher education, you just go on and on. We just don't have the horses and we don't have the manpower resources to do the kinds of things we ought to be doing with this manpower data. I feel rather guilty answering as I do, but honestly, we're not really doing the job we should be doing.

The Role of BLS Regional Offices

Eight regional offices

Each of the ten federal regions is served by a regional office of the Bureau of Labor Statistics (BLS). However, in the far West a single BLS office serves regions IX and X, and the mountains-plains regions VII and VIII are served by a single office located in Kansas City, Missouri. Thus, there are only eight regional BLS offices, all of which were visited during the course of the present study.

A complete description of the major BLS programs is beyond the scope of the present study. The interested reader is referred to Major Programs 1974/Bureau of Labor Statistics (1) for a summary of current BLS programs. In general, these programs cover current employment analysis, manpower structure and trends, prices and living conditions, wages and industrial relations, productivity and technology occupational statistics and health statistics, and economic trends and labor conditions. Appendix B contains more detailed information on current BLS programs of particular concern to this study.

Variety of responsibilities

The assigned responsibilities of personnel in the regional BLS offices include the collection of data, data analysis, responding to inquiries and dissemination of information, regional economic analysis, and providing technical assistance to the federal/state cooperative programs which are funded by the Manpower Administration (with the single exception of the Occupational Safety and Health Statistics program). These federal/state cooperative programs are typically joint efforts by state employment security agencies and the Manpower Administration. Regional BLS offices provide technical assistance to the states taking part in these programs to ensure compatibility of data across the states. Such technical consulting and other personal assistance provided by the regional BLS to the states encompasses a wide variety of activities including employment statistics, labor turnover, employer contributions, state and area unemployment estimates, manpower projections, wage data, and other similar areas of concern.

Publications cover large populations

BLS publications tend to focus on large geographic areas. However, we were told by BLS personnel that they occasionally perform special studies and data interpolations or extrapolations in response to requests from agencies, organizations or individuals in the region. The extent to which such requests are honored depends largely upon who initiates the requests and the resources available within the BLS regional office. Great numbers of requests for information come into the regional offices daily; many can be satisfied by published documents, but others require the expenditure of many man-hours. It is the latter type of request which must be carefully considered in order to make the most efficient use of available resources.

Few requests from vocational educators

Requests made by vocational educators, while relatively limited in number, frequently are for manpower data tailored to small geographic areas. We were told by BLS personnel that the individuals making these requests appear to be unaware of the limitations in the data when they are disaggregated to small geographic areas, such as school districts or sub-SMSA levels. BLS confidence in much of their own data is not very high when it is cut below the SMSA level, and they feel that it would be misleading to educators to provide them with

manpower data for a particular school district. The sampling procedures currently being used are not considered to result in samples of sufficient size to produce valid estimates below the SMSA level. An increase in sample size would increase the costs beyond present budgetary limitations. Furthermore, many BLS regional personnel expressed the opinion that state and local employment security offices are in a much better position to provide educators with the manpower demand data they need.

More requests from counselors

Requests for published manpower data from educational agencies are most likely to come from guidance and counseling personnel in the schools. BLS regional offices make considerable efforts to provide school systems with information on the Occupational Outlook Handbook, which describes the national outlook for 850 occupations and more than 30 industries. One regional BLS office alone distributed announcements of the publication of the 1974-75 Handbook to each of the more than 2000 school systems in its region.

No formal communications with vocational educators

No formal arrangements for communication and cooperation have been established between any of the regional BLS offices and the educational planners of vocational education programs at the regional, state or local levels. However, BLS regional personnel explained that to the extent that they were able to satisfy the requests for services which come directly from educational institutions, educators in the regions, the states, and the local situations, these requests have been honored. For example, regional BLS personnel frequently accept invitations to be speakers at Career Day activities in the schools, and in connection with small group discussions having to do with guidance and counseling as provided by the schools, whether they be middle schools, secondary schools or postsecondary institutions. It was recognized, however, that there has to be a limit to the number of invitations that can be accepted, since as one BLS official reported, "it takes it out of our own hide." He further explained that there is not sufficient time to perform all of the services that educators request, and beyond that there are no incoming funds from any source that cover the expenses involved in the derivation, the aggregation, and the analyses of data for specific vocational education purposes. Hence, some judgment is being exercised in many of the regional offices concerning requests made of the regional personnel for their time and for the expense that would be incurred in providing personnel to speak, and the kinds of data and data analyses that are requested.

Limited staff time

Services dependent upon personal relationships

There are other activities in which regional personnel take part, and when invited to meet, sit or consult with a vocational education advisory committee, they willingly accept up to the point where it impinges on their time and

mandated duties. In such cases, they indicated that they are pleased to give technical advice, to provide published data, and on occasion to obtain and analyze new data. The kinds of activities in which regional personnel engage are not uniform country-wide but differ from regional office to regional office and depend upon the personal relationships established between the regional BLS personnel and the vocational educators in the region. For example, where excellent relationships have been established, regional personnel participate in county-wide or city-wide projects that involve vocational education planning for new institutions. On the other hand, several of the regional BLS offices declared that their regular activities are so demanding with regard to time and funds that little if any time is available for them to take part in area or local education activities, other than providing published documents and answering telephone requests coming in from the field.

When queried with regard to requests for information or technical assistance coming in from the regional or state vocational agencies, the BLS personnel responded that it is extremely difficult to know which of the individuals and which agencies are represented in the request. Requests often go directly to a telephone operator in the regional office who routes the telephone calls to individuals who are responsible for the kinds of information being requested. A log is kept of the requests that are made and to whom the requests for information are directed. For the most part, the requests are for publications that have been previously announced in the newspapers, on the radio, and occasionally on television. The announcements of new publications dealing with matters that affect vocational education tend to bring great numbers of requests for copies almost immediately following the announcements, but requests tend to drop off sharply. Only rarely are requests known to come from the regional Office of Education, and almost never is there an identification of a written request from the Office of Education for publications made available through the regional BLS office.

Very few requests from regional OE

The matter of improved communications between educational and manpower information agencies in the region was discussed at length with the BLS regional personnel. Almost unanimously, they were vague about how communications could be improved, since the bulk of communications in the past consisted of supplying speakers on occasion and responding to requests for assistance as members of vocational education advisory committees. How to effect better relationships and hence a greater exchange of information, data and data analyses was not generally given much consideration in the past, and the answers to questions relating to this matter

Recommend more centralized control

drew very little substantive help from BLS personnel. In one instance, however, the director of the regional BLS office indicated that at the national level,

> The Department of Labor and Department of HEW really could stand some coordination. There needs to be centralized controls and improvements concerning methodology of data gathering and forecasting in order that the results will be equally usable by the Bureau of Labor Statistics and by educational people and counselors.

Obviously, it was expected that if the action could be initiated in Washington, the regional offices would follow.

Educators need to be more informed of data limitations

A number of the BLS personnel felt that if educators knew more about data and how they are acquired, aggregated, analyzed and made ready for publication, they might not be so insistent on obtaining data at such miniscule levels of specificity. It is this kind of detailed information that BLS personnel felt local vocational educators could obtain themselves by analyzing and estimating outcomes and projections from data provided for larger geographic areas or through contacts with the local employment security office. One BLS staff member commented,

> Educators appear not to be conversant with what is available or how it is structured. They are not aware of data strengths and limitations, nor the assumptions that underlie the data collection. Educators should have more exchange with state employment security commissions in terms of exchanging data needs and data availabilities.

Prefer long-range projections for large areas

With regard to geographic coverage, BLS personnel volunteered the opinion that they believe that it is far better to have long-range projections for larger areas and to have these interpolated for shorter projections and smaller areas. The demands of educators for much more finite information for smaller areas and with regard to parts of greater clusters of occupations present real problems to BLS, since funds and personnel are not available to provide this kind of information. Furthermore, it was noted that requests for manpower demand projections on small geographic areas appear to disregard the students' mobility after graduation.

Recommend VEA funds transferred to DOL

In several of the regional BLS offices it was pointed out that an analysis of the Vocational Education Acts had revealed that funds were authorized in sufficient quantity

to enable educators to obtain needed data for planning.[4] Some of these funds, it was pointed out, were obviously made available in order that regular data-gathering agencies such as the Bureau of Labor Statistics could provide such data. The transfer of such funds to BLS reportedly would rapidly effect the needed changes, and some suggestions were made that this procedure be explored and further energized. In one case, a regional director of BLS suggested that the Office of Education should take action to transfer the needed funds at the national level to the Department of Labor, with specifications that the funds be focused directly upon the development of improved projections at sub-state levels, or upon local levels for the purposes of providing usable data for vocational education planning. He indicated that there is no way that the regional BLS office can currently divert personnel and funds from its established purposes and tasks for providing information on the oft-requested levels for use by vocational education planners. BLS personnel indicated that resources are a primary consideration in the acceptance of special studies done for a region. The resources control the kinds of studies that can be done and the numbers of individuals to whom the task of conducting the study may be delegated. Marked by a willingness to conduct studies wherever needed, and fully aware of the urgency on the part of some educational agencies and professional educators for studies that need to be done, the regional BLS office emphasized the urgency of providing supporting funds to accommodate such requests. The funds authorized in federal vocational education acts could be transferred to BLS regional offices for the conduct of such studies that require the expertise, facilities and skills of BLS regional professional personnel.

The Role of Manpower Administration Regional Offices

Manpower Administration is one of the major operations of the Department of Labor, and it maintains a regional office in each of the ten federal regions in the nation. Its operation consists of field units and office units providing such services as administrative management services, unemployment insurance services, equal employment opportunity services, program and technical support services, and other associated activities. Each of the regional offices is staffed with professionals and secretarial/clerical assistants, where the proportion is approximately 30 percent professional and 70 percent clerical/secretarial. Well over 100 individuals

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[4] See page 1 of this report.

staff a regional office in the more populous areas of the country, and somewhat less than 100 are employed in the regions having less population.

In general, the regional Manpower Administration office receives data that are initially collected by the local employment security offices, processed by the state employment security agency, and subsequently forwarded on to the regional Manpower Administration office. Since Manpower Administration provides the funds for operation of state ES agencies, it has the responsibility for mandating what will be done, and in some instances even how it might be done in those cases where data acquisitions cover rather specific and technical areas of investigation.

Work through state ES

The regional Manpower Administration office has a number of mandated responsibilities for technical assistance and for research and analysis in the state departments of employment security. Mandated responsibilities include the assembly of data relating to labor market information that local agencies produce and information such as general economic conditions relating to industry job breakdowns, unemployment rates and other associated factors. On occasion, the regional Manpower Administration office finances the production of data by private agencies, out of which may come such results as sub-state matrices and job breakdowns.

Variety of mandated responsibilities

The procedures by which data are obtained and aggregated are designed such that at the smallest unit of the organization, the local employment security commission (ESC) office, the data are collected and reported to the state ES office, where they are aggregated and forwarded to the regional Manpower Administration office. In some instances the data are forwarded to the Bureau of Labor Statistics for aggregation into national reports and projections. Not all of the data travel that route, however, since some are for local/regional utilization. Thus, in the regional offices, we noted a number of publications, fact sheets, and other periodical materials that had been produced largely for use in the region and for distribution through the state and local ES offices.

Information was requested of Manpower Administration personnel concerning the involvement of the states in their region in the Occupational Employment Statistics (OES) program. The results by regions cannot be generalized, since in some regions all of the states have either been involved in the OES since its inception or have only recently gotten into the program; in other regions some states are not yet participating in the OES program. Hence, it is judged much

Too early to determine value of OES

too early to forecast the values of the OES program on a nationwide basis, although several of the regional Manpower Administration offices volunteered the information that occasional evaluation of some of the OES program results has indicated that OES, when fully operational, will be very effective. Comments were supplied such as, "It has some very valuable aspects, and more advantages to the OES program will develop as time goes along," "The technical implementation of OES has been very slow," "One of the program weaknesses starts at the national level, since BLS is technically responsible and the Manpower Administration is administratively responsible (including funding of the OES program)," and "OES will ultimately yield some knowledge about occupational demand but only as it is used in making projections through a multiple regression technique using the OES matrix."

RAL 685 varied in effectiveness

There were differing opinions concerning the effects of Research and Analysis Letter No. 685 (RAL 685) in the regions. RAL 685 recommends that the state ES offices prepare an annual report containing information of value to vocational educators for program planning purposes. Responses from regional Manpower Administration personnel indicated a wide variety of observance of the recommended practice. In some regions, manpower personnel know nothing at all about whether or not the states are actually preparing RAL 685 reports. In other regions, full compliance with the recommendation was reported and copies of the report were received annually by the regional office. Because of the rather spotty information concerning which states were conforming to RAL 685, the concomitant assessments of the utility of RAL 685 were varied. No regional offices had received feedback from vocational educators concerning the utility of RAL 685 reports. In a few instances it was nevertheless considered to be a useful document for vocational educators but served no other purpose as far as the regional Manpower Administration was concerned. Specific comments concerning these reports tended to be negative:

> The annual report for vocational education (RAL 685) is sort of a joke as far as I'm concerned. It's not enough information. I think the type of information you (vocational education) need is matrix and OES information.

In another region the recommendation was to "do away with [RAL 685 reports] and place the emphasis on the OES program."

RAL 685 not a high priority

The stated purpose of RAL 685 is "to establish a systematic basis for transmitting manpower and occupational

projections information to the vocational education system in accordance with the Vocational Education Amendments of 1968." The 1968 Vocational Education Amendments authorized the Commissioner of Education to "reserve an amount, not to exceed $5,000,000 in any fiscal year, for transfer to the Secretary of Labor to finance . . . national, regional, state and local studies and projections of manpower needs . . ." It has been noted previously that this money was never transferred, and apparently this accounts for the feeling on the part of some Manpower Administration officials that compliance with RAL 685 is ". . . not a high priority, and hence is given only passing attention."

Education liaison office considered a luxury

The regional Manpower Administration officials were queried with regard to steps that might be taken and opinions that are held regarding the manner in which state employment security agencies may better provide needed information to vocational education agencies. This query elicited a number of varying responses. Most frequently mentioned was the need for funds to provide the information education needs. One Manpower Administration official, in referring to an education liaison office in a state ES agency, made the following comments:

> That's one of our targets--from the regional point of view--to eliminate. Why should we lay out money for that? Is that going to help anybody get a job? Is that going to help anybody out in a local office?. . . Why should we have those luxuries floating around? Our main job here is to get people work, and every brass penny we spend on staff not needed for our main line operation is a waste of money in my opinion . . . We don't need a job like that. What the hell do we want that for?

Other Manpower Administration officials reported that state employment security agencies simply do not have the necessary funds to make available to the research and analysis branch to develop occupational information systems to the degree required by vocational educators. One regional official pointed out that the best projections for vocational educators are "macro," and vocational educators should be willing to take the data available from macro projections and reduce them to the proportions needed by state and local educational agencies.

No standard procedures for collecting employment statistics

Regional Manpower Administration officials reported that a variety of procedures are being used by the states to secure occupational employment statistics. It was reported that no one standard procedure is used. In one

region four different ways are reported in use. One is through RAL 685, another is through the Interim Projection Program (IPP) conducted by manpower, a third method is the "Job Bank" tabulation and a fourth method is through the efforts of the OES program. Another official of Manpower Administration in a regional office pointed out that it would not make any substantial difference which method was used, so long as the basic information concerning occupational employment statistics were produced. Still further, other regional offices reported the uses of other systems including ESARS (Employment Security Automated Reporting System) and POSARS (Plan of Service Automated Reporting System). In general, no standard procedures are being used, and the states and even the local offices tend to improvise on the basic methodology which they use in collecting their data.

In order to determine the extent of coordination between regional Manpower Administration agencies and vocational education planners on the state and local levels, questions were raised of the Manpower Administration personnel which touched upon the extent to which they are regularly involved in activities with their vocational counterparts. In all of the federal regions, it was reported that there is no formalized procedure for meeting with vocational education personnel, and in some instances contact with vocational people is virtually nonexistent. Several respondents explained that federal/regional councils for each of the regions were created by executive order and that the agencies involved in the councils include Labor, HEW, HUD, DOT, LEAA, Agriculture, OEO, Civil Service, EEA, Interior, and others. The practice observed is for regional directors or appointees to meet regularly to discuss interagency problems. Many federal/regional councils have standing committees which are charged with the responsibility of dealing with manpower problems, and it was suspected in several of the regions which volunteered information that on such standing committees "vocational educators might be included." In several regions, more specific information was available concerning vocational education participation on the regional councils. Some indicated that the state authorities responsible for vocational education are actually members of the council and participate regularly. The councils have as their major responsibility coordination and some authority for preventing duplication of services. Meetings in one region are on a monthly basis, while in another region meetings are held whenever problems arise that demand the attention of the council. Several of the regional offices expressed the hope that with the further growth and improvement of Comprehensive Employment and Training Act (CETA) programs, the effectiveness of the federal/regional councils will be enhanced. At the present time, it was observed by regional

Lack formalized procedures for working with vocational education

Manpower Administration personnel, relationships are somewhat strained since many of the duties and responsibilities, formerly the tasks of Manpower Development and Training Act (MDTA) personnel, have now been transferred to CETA. They are, thus, beyond the reach of the federal/regional councils, since CETA prime sponsors are appointed by the governors of the states.

Few informal contacts with vocational education

Informal contacts with vocational educators were reported by regional Manpower Administration personnel to be very infrequent. The responsibilities of the regional Manpower Administration personnel are so involved and comprehensive that little time and less money are reported to be available for devoting very much effort to facilitating the wishes of vocational educators in the region. On occasion, it was reported, regional personnel take part in advisory committee activities on a state level where vocational educators have requested that type of participation. Other occasional informal contacts are by telephone, although there is no actual count or record of the numbers of times that telephoned requests for information and/or reactions had been received. Throughout the regions, the feeling appeared to be quite general that there is little hope or expectation that the informal contacts of regional Manpower Administration people with vocational education personnel will grow or expand, since the interests of the two groups are not sufficiently congruent.

Virtually no contact with regional OE

In general, there is little contact, formal or otherwise, with the regional Office of Education personnel, except through the federal/regional councils. It was reported that virtually no contact is maintained by Office of Education personnel with the regional Manpower Administration personnel, and in some situations even the names of the individuals in the OE offices are unknown to the regional Manpower Administration people. When requested to supply information on how this type of communication might be improved for the mutual benefit of both agencies, several of the regional personnel implied that there can be little additional communication unless money changes hands. Their position is that USOE regional office personnel should be prepared to finance meetings and the preparation of data, projections, and publications, rather than continue to talk and request information and publications without the necessary financial backup and support. The regional Manpower Administration personnel repeatedly stressed the fact that its staff and funds are committed, and any additional information, data or special publications requested by vocational educators should be subsidized by that agency whether it be on the regional, state or local level. As one regional Manpower Administration official put it,

USOE should pay for services

We are not in the business of providing vocational education with services that require additional expenditures or resources. If vocational education can profit from the materials that Manpower Administration has developed, then so much the better. However, we are not going out of our way to produce materials and expend our limited funds for developing all kinds of data, projections and publications for vocational education.

CHAPTER VI

EXEMPLARY PRACTICES

During the course of the present study a number of practices were observed which we consider to be exemplary and worthy of mention. Many of these practices are intimately related to the use of manpower data in vocational education. Some do not relate to manpower data per se but are nevertheless reported here because of their exemplary nature and potential for duplication by others. We will not attempt to describe the causal factors which resulted in these practices but, rather, will merely list the practices and briefly describe them as they were described to us. State-level exemplary practices are presented first, followed by exemplary practices at the local level.

State-Level Practices

- A staff member from one state vocational education agency spends up to half of his time working in the research and statistics division of the state ES agency. This working relationship provides mutual benefits to both agencies. The vocational education agency receives manpower data tailored to its specific needs, and the staff gains better understanding of the strengths and limitations of the data. The state ES obtains assistance in preparing the data and feels that the vocational education agency is truly committed to utilizing manpower data. This results in the provision of the best data the agency is capable of providing.

- The management information system for occupational education under development in one state is designed to provide a thorough record of the post-program performance of program graduates, including estimates of productivity. This systematic monitoring of the impact vocational education has on the world of work makes this MIS one of the most innovative in the country.

- Two of the ten states have implemented management information systems for occupational education which provide manpower demand and supply projections for sub-state areas.

- One state has an economic forecast model that is used to support numerous aspects of state-level policy and decision-making including vocational program offerings. Assumptions underlying this model are reviewed and agreed upon by all state agencies using the model.

- In one state a manpower management information system has been developed through the joint efforts of state and local vocational education and ES agencies. The general goal of this system is to develop short-term (up to five-year) manpower projections for all SMSA's in the state. These projections have been published for all SMSA's in the state, and the publications are being produced by ES for vocational educators. The system utilizes BLS technology and is designed to provide basic information useful to vocational education planners for curriculum development, determination of staffing needs, facility planning, and career guidance and counseling.

- The community college system in one state has developed a comprehensive evaluation system to provide both professional assistance and evaluative instrumentation to interested community colleges. The goal of the evaluation system is to help the community colleges assess what is currently provided in relation to what is desired. The evaluation procedures are seen as a service to the local community colleges to help them improve their programs. Most colleges that have taken part in the activity are enthusiastic about continuing.

- The management information system of one state vocational education agency provides the state agency with immediate access to information on every student in the state currently enrolled in a vocational education program.

- A computer-assisted placement service is being operated by one state vocational education agency. Employers throughtout the state are provided the names, addresses and other contact information on the thousands of secondary and postsecondary vocational program graduates who have indicated they will soon be available for employment. An employer hiring-interest survey is conducted each January to determine the occupations for which employers may be hiring in the foreseeable future. Employers who request information about graduates from specified occupational programs receive computer-printed lists of the names, addresses and telephone numbers of graduates they may wish to contact. Schools that participate in this program receive information about employers in their area who have indicated a possible need for graduates from specific programs. Information is also provided on employers who previously hired vocational program graduates and the types of occupations for which the graduates were hired. This placement service is provided without charge to either the employers or the participating schools.

- Two of the ten states prepare brief versions of their state plans; they are widely disseminated to other agencies within the state, schools, teachers, students, parents and others interested in vocational education in the state.

- One state is anticipating using students' social security numbers to collect occupational follow-up information on former students (given appropriate legislation). State income tax forms would be used to identify the employment status, wages, locations and occupations of program completers. This information would be aggregated in such a way that the identity of the former students could not be determined.

- Three state vocational education agencies are working with the local districts to institute management by objectives (MBO) throughout the state.

- The allocational formulas used by one state agency to disburse VEA funds rely entirely on objectively quantifiable measures rather than judgmental factors. Separate formulas are used for each part of the Vocational Education Act.

- Two state vocational education agencies require as a prerequisite to funding that local districts participate in the preparation of a regional five-year plan for vocational education.

- The commissioner of the state employment security commission in one state is a member of the state board of vocational education.

- A librarian employed by a state ES agency meets monthly with librarians associated with other agencies throughout the state to keep them informed of new publications ready for dissemination. In this way the publications of the state ES receive exceptionally wide dissemination, and feedback is obtained from the field.

- One state ES is currently developing a standardized occupational clustering system that is designed to meet the needs of vocational education, the Department of Labor and the Bureau of the Census.

- A Joint Occupation Preparation Task Force in one state has been established to develop an effective and efficient approach to matching projected manpower supply with expected manpower demands. The Task Force played a key role in developing the research proposal which served as the basis for the later development of a state-wide manpower management information system. Membership of the Task Force includes the director of the state ES, the state superintendent of public instruction, the chancellor of the state community college system, the state director of vocational education, the executive director of the state advisory council on vocational education and regional representatives from both ES and local vocational education agencies.

- One state vocational education agency, working in cooperation with the state ES agency, is producing occupational information in microfiche format. This information is intended for student guidance purposes, and the descriptive information is updated every two years. The ES in another state has developed similar microfiche descriptions for use in the local ES offices; however, the microfiche are also being supplied to schools that are willing to pay for them.

- Several state ES offices are producing occupational guides for use in the junior and senior high schools. These materials include brochures describing particular occupations, general information on how to find a job, listings of occupations that do not require postsecondary training, etc. In two states the materials are printed in both English and Spanish.

- One state ES receives follow-up data from the state vocational education agency. Analyses are performed on these data to identify new linkages between vocational programs and occupations. The resulting information is provided to both local ES counselors and school guidance and placement personnel.

- A state-wide Job Match system has been implemented by the ES agency in one state, and most of the local ES offices have terminals to directly access the computer in the central office. This system contains information on all job openings listed with the ES offices and the applicant characteristics of all registered job seekers. As implied by the name, Job Match is designed to match the characteristics of applicants with occupational requirements.

- One state ES agency has established an office of training and liaison in an effort to facilitate better communications between the ES and the state vocational education agency.

- Skills centers in one state are jointly operated and administered by the state ES and the state vocational education agency.

- In one state the state vocational education agency, the state department of public instruction, the state ES agency and a state university are working together on a proposal to develop an occupational information system. This information system is intended to be used primarily for student vocational guidance purposes. The state ES has agreed to absorb $50,000 of the initial developmental costs, while the other agencies involved have agreed to pay for the operating and updating costs of the system.

- It was a state-wide practice in one state for local ES offices and postsecondary vocational schools to display each other's literature in their literature racks. In this way local ES offices were able to provide their clients with information on postsecondary and adult educational offerings in the area, and students were provided with job vacancy survey data.

Local-Level Practices

- Local ES offices in several states frequently conduct special surveys tailored to the needs of area vocational schools.

- In at least three states school counselors work in the local ES offices during the summer months. In some cases this work is performed without pay.

- In several districts local ES personnel are housed in the schools to provide job placement services to vocational students.

- Services provided to the schools by some local ES offices include counseling students, testing students using the General Aptitude Test Battery (GATB), conducting simulated job interviews, job placements, taking part in Career Day activities and distributing occupationally related literature.

- Some area vocational schools are providing their local ES offices with the results of their follow-up studies, data on enrollments by program area and information on the number of graduates who expect to enter the labor market in the near future.

- An experimental project in one postsecondary district has community college vocational instructors conducting classes in the high schools and high school vocational instructors teaching at the community college. This is intended to keep the instructors in touch with the particular needs of the student populations at the different educational levels.

- One skills center has a contract with five local school districts to provide vocational training to approximately 200 dropouts. The courses are conducted by skills center personnel at the local high schools in the afternoon and evening. The schools identify the dropouts, and the skills center's outreach team recruits them for training.

- One skills center has a contract through CETA to conduct a work experience program for students who are currently enrolled in high school. The students spend a part of each day at the high school and a part at the skills center, and in the evenings they go to employer locations where the work they perform corresponds to their vocational interests.

- Many local ES personnel are members of vocational/technical advisory committees in the local secondary or postsecondary schools.

- One local ES office has a dropout referral program with the local schools. If a student is identified as a potential dropout by the school, the ES staff works with that student and the school psychologist to test and counsel the student. They attempt to keep the student in school, design a plan of employment for the student, or, if all else fails, attempt to find a suitable job for a determined dropout or refer him to another agency for more specialized services.

- One local ES office has a contract with the local public school district to station ES counselors at the high schools to provide counseling and job placement services to students who are not going on to postsecondary education. This ES office also conducts six-month follow-ups of the students they place.

- One local school refers all applicants for admission to certain programs to the local ES office for evaluative, preselection listings and uses the results in making admission decisions.

- One area vocational school routinely follows up graduates one, three and five years after graduation. This information is used to evaluate and improve program offerings.

- One area vocational school played a major role in developing and implementing a state-wide manpower management information system. The system is a cooperative effort between state and local vocational educators and employment security personnel, and is funded by both vocational education and ES dollars. The data are used extensively in both program planning and student guidance.

- Counseling vans equipped with large quantities of occupational information and aptitude testing packages are used by one regional vocational school to provide vocational counseling services to the eight school districts it serves. Educational and career planning questionnaires are administered throughout the districts, the responses are analyzed by computer and the results of each student's responses are returned to the counselor in his high school who works directly with the student to make plans about his future.

- The "Aids to Career Education" program in a large urban school district focuses on disadvantaged students or students who are failing in school. Peers of the students or young adults in college work with the students to show them the relevance of their education to work and how to go about getting through school and getting a job.

- A computer-based interactive guidance system is operating in one community college. The system enables students to explore various educational and career options based on their own values, their abilities and future employment opportunities.

- A regional ES office in one state is about to begin a program that will train people to teach others how to use existing manpower data. The rationale for this program is that ES does not have adequate resources to provide direct instruction to all the people who can benefit from workshops on the uses of manpower data, so they will train others to provide such instruction.

- In one state, local ES office managers are members of most local advisory councils for vocational education.

- A survey of employment needs in a postsecondary school district has been conducted and published as a cooperative effort by the local ES and the technical institute.

- Several local postsecondary schools and ES offices exchange literature describing their services for display in each other's literature racks.

- Local ES offices in one state provide microfiche summaries of local job opportunities to schools that request them. Students seeking employment can review this information in the schools; however, the names of the employers are intentionally deleted. Thus, the students must contact ES to apply for jobs in which they are interested. In this way ES receives credit for placement.

- One area vocational school contracted with a private consulting agency to conduct comprehensive and objective studies of the employment needs in their county and in adjacent labor market areas. The resultant reports provided a mainstay for planning.

- A school Registration Day is annually conducted by one local ES office. The ES staff go to the school and register students who are about to enter the labor force, issue social security cards to those students who need them, and answer questions concerning ES services.

- One local district has developed a state-wide job development and placement program in agri-business. This district was reported as having the best agricultural employment data of any organization in the state. The state vocational education MIS uses these data as an input.

CHAPTER VII

FACTORS INFLUENCING THE AVAILABILITY AND USE OF MANPOWER DATA

In the preceding chapters, we have endeavored to report on the current state of affairs with respect to the availability and use of manpower data in ten selected states. The intent of these chapters was purely descriptive. No attempt was made to explain "how" or "why" the situation developed. However, in order for this study to have implications for policy considerations, we believe it imperative to examine the underlying causal structure.

We have abstracted from an analysis of our findings five factors which we believe to be central to an understanding of the observed conditions. These factors underlie the explanatory frame around which the observations may be organized. Each factor is described by yoked opposites which define the factor by a statement of extremes. The extremes are described by idealized descriptions of how persons and/or agencies might be expected to act if they subscribed totally to that position. In reality, persons and agencies will fall somewhere between the extremes on each of the factors. Although highly interrelated and interwoven, each factor will be separately discussed in this chapter. The discussion of each factor deals with hypothesized tendencies and explores the meanings and consequences of those tendencies for the availability and use of manpower data.

Factor I: Student Demand - Manpower Requirements

This factor spans the issue of whether vocational education should be more responsive to social or economic demand. Social demand reflects the aspirational level of society for vocational education as indicated by individual student need for vocational education. Economic demand reflects the human skills required by the economic sector to produce the composition of goods and services needed by society. At issue, then, is which should receive the greater emphasis--the developmental needs of the individual or the productive needs of collective society.

Strict adherence to the manpower requirements approach would require one to argue that the primary purpose of vocational education is "training for useful employment," in essence, to give an individual the specialized knowledge and skills required to secure and keep a job. Vocational programs, according to this argument, should be responsive to the human capital needs of society as determined by labor market manpower requirements. Programs, ideally, should be expanded to meet increasing manpower needs and curtailed or terminated when the need diminishes or no longer exists.

Programs are assumed to prepare students for entry into specific occupations. The content of vocational programs should, therefore, be dictated by the functioning content of these occupations. As stated by an early disciple of the manpower requirements approach to vocational education, "If you want to train a youth to be an efficient plumber, you must select the actual experiences in the practice of the plumbing trade that he should have and see that he gets these in a real instead of a pseudo way" (1, p. 228). Contemporary vocational curricula organized to focus theory and practice on specific content and taught by those who have mastered the skills of specific occupations attest to the continuing efficacy of this early admonition.

In contrast, strict adherence to a student demand approach would require one to argue that vocational education exists to serve the developmental needs of people. Accordingly, vocational education is seen as a developmental effort that provides the channeled opportunities for a person to (1) develop specific salable psycho-motor skills, (2) progress from the development of these more specific salable psycho-motor skills to the development of more generalized complex cognitive skills, and (3) exit from the process at his own volition with a developed and salable skill. Since the emphasis is on the developmental needs of students, expression of student needs is the prime justification for offering programs. In the words of an early proponent of the student-centered philosophy:

> Vocational training must be indissolubly linked with other forms of training which will broaden the outlook of the student, which will make him a citizen as well as an efficient worker with hand or brain. The aim of modern education should be, if the aim be anything more than the production of a nicely articulated industrial system, to produce men, not machines (2, p. 132).

Student Demand

The implication of these distinctions for the usage of manpower data is one of emphasis. The student demand orientation tends to emphasize the multi-faceted needs of persons for skills-oriented education. Needs for immediate employment in a specific occupation may be but one of many reasons that an individual seeks vocational education. He may, as in auto mechanics, enroll in a vocational program because he wants to be a "shade tree mechanic" in his spare time and not because he seeks immediate employment. It may be that as a result of his vocational experience, he is encouraged to develop to the extent that he ultimately becomes proficient in automotive engineering. The point being made is that the student demand philosophy tends to emphasize the process of individual development rather than the production of a product designed to satisfy the immediate needs of specific occupations. Because of the emphasis on individual development, data on the current and anticipated demand for specific occupations are relatively more important for vocational counseling and guidance of individual students than for planning

programs. Programs tend more to be offered according to the "collective wisdom" of what students need. Depending on the school and the community, this collective wisdom may represent the special interests of a vocational teacher; the response of a local vocational supervisor to repeated requests from students, parents, or local community interests; the overt or covert interests of the school principal and/or superintendent; the desires of the local school board; a combination of the above; or simply the weight of tradition. Whatever the exact ingredients, intent to offer a program is grounded in the basic Deweyian dedication to the individual.

Given the intent to offer a program, manpower data tend to be used after the fact as a justification for that intent. The extent of the justification depends primarily upon the extent to which manpower data are required in state approval and funding processes. Since most states allow considerable local discretion in the choice of manpower data, use of formal manpower data tends to be limited to those which are more readily available. The degree of use is also dependent upon the local assessment of the likelihood of state approval and the degree of local involvement. If the program application has considerable local support and the local educational agency anticipates state support, there is little need for extensive justification of manpower need.

Manpower Requirements

Just as student demand emphasizes the centrality of the individual, the orthodox manpower requirements approach emphasizes social efficiency as the ultimate yardstick of success. Limited resources require allocation across competitive uses in the most efficient manner. Human resources, like other resources, must be allocated according to social need. In order to determine social need, there must exist a consensus on society's relevant values. In the case of the manpower requirements approach to vocational education, this consensus is assumed to stem from the work ethic--a belief in the positive virtues of work. Advocates of the manpower requirements approach believe that the function of vocational education is to produce not only trained workers ready for immediate employment but also workers who can follow directions, be dependable, be adaptable, get along with people, and have a positive attitude--in short, efficient workers who will be content with their jobs and supportive of the social and economic system.

Labor is regarded as the chief contributor to prosperity and growth. The general premise is that work is preferable to welfare. If a person is willing but unable to find work, it is assumed that training will make him more employable. Wages paid to workers are assumed to equal that of their marginal productivity; i.e., the wage paid to a worker for his last unit of effort is equal to the contribution to the value of the product attributed to that effort. Since wages are conceived as returns on investment in human capital, income to workers can be increased only by increasing their productivity. Vocational education is seen as a means of teaching individuals a ". . . set of productive abilities which increases their productivities in some jobs" (3, p. 31).

Proponents of the manpower requirements approach to vocational education planning are committed to equilibrium as the ideal state of affairs. Demand for labor must intersect the supply of labor in order to create the market equilibrium necessary to maintain system balance. In order to equate the units of "talent" that measure supply and the units of productive capacity that measure demand, employers are supposed to demand what workers supply--stocks of human capital. The quest for demand-supply equilibrium is manifested in the manpower match maxim which states that the goal of manpower planning should be to match the supply of trained manpower to the demand for trained manpower. Thus, programs should be tooled-up to produce workers for those occupations with a short supply and curtailed for those occupations with an over-supply. The difference between the numbers demanded and the numbers supplied represents the "net demand" and, as defined, is the measure of the deviation from equilibrium.

The goal of planning according to the criterion of manpower requirements is to allocate training and educational resources so as to minimize net demand. This manpower match philosophy is demand-oriented in that supply is to be adjusted to match a fixed level of demand which is regarded to be independent of supply. It is the social responsibility of vocational education to adjust the supply of labor with particular skills by controlling the program alternatives available. Enrollments in programs judged to produce skilled workers in excess of those demanded are to be curtailed even though the programs are popular in terms of student interest. Conversely, programs providing training for occupations with a short supply are to be offered and students encouraged to enroll even though there may currently be little student interest. In contrast to the student-demand approach discussed earlier, programs are to be offered because of a societal need for developed human capital. Students are assumed to have a sovereignty of curricular choice among pre-existing program options. Just as consumers are supposed to have free choice from a bundle of commodities at different prices, so are students assumed to have freedom of choice among a number of socially determined education options for developing their stock of capital. Although individuals have freedom of choice to maximize their employment and income from a number of training options, their collective choice is not assumed to alter the structure of educational options from which they choose.

Manpower match planning requires expertise in long-range forecasting. Since supply is to be matched against a targeted demand, there must be some means of anticipating future demand. Thus, manpower planners must of necessity forecast future conditions. In order to have continuity between the present and the future, occupations are fixed. That is to say, the set of occupations for the present and the future must be identical in order to determine a change in occupational employment. This requirement makes dealing with new and emerging occupations difficult since they evidence an evolving rather than a static occupational structure.

Targeting manpower supply to demand cannot be achieved without the assistance of quantitative models. It is necessary to predict not only future demand, but also course enrollments and placements since they affect future supply. The models, being abstract representations, are divorced from the institutional and legal constraints of the real world. Vocational education not schooled in the analytic approach must make decisions based on information derived from logic rather than intuitive judgment. This dimension brings us to a discussion of Factor II.

Factor II: Personal Knowledge - Processed Knowledge[5]

The growing scale and complexity of our post-industrial society have created a crisis of knowing. This crisis centers on whether it is possible to gather and process enough information to really know a society as complex and turbulent as ours. The resolution of this crisis will depend on how we go about acquiring and applying knowledge to action. According to Friedmann (4), it is useful to distinguish between personal knowledge and processed knowledge. Personal knowledge is intuitive knowledge gained from first-hand personal experience or from the experiences of another whose authority is valued. Processed knowledge is based on systematic observation and measurements made under controlled conditions.

Personal Knowledge

Personal knowledge is that gained from immediate experience in a specific situational environment. It is knowledge whose only validity test is whether it works or doesn't. The knowledge, being personal, remains largely unexamined and untested by empirical-logical analysis. The temptation is to extrapolate from limited personal experiences to broad empirical generalizations. The perspective is situational, being slanted by the individual's role in society and the unique context of his involvement. Being closely identified with the knower, personal knowledge is an incomplete and fragmented picture of reality as seen through the personalized glasses of the individual. It is conservative in that only those experiences which are consistent with central beliefs are selected as justifications of its validity. The primary purpose of personal knowledge is as a working assumption--a rule of thumb--to serve as a basis of action.

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[5]This section draws heavily from the work of J. Friedmann. Retracking America: A Theory of Transactive Planning, Anchor Press, Garden City, N. Y., 1973.

Because personal knowledge is limited to the scope of personal experience, it must of necessity be augmented by second-hand knowledge. The validity of secondary knowledge is only as good as the authenticity of the source. The authenticity of a source depends upon its legitimization and credibility. A secondary source is legitimate if it can be established that it has the appropriate credentials to qualify as an authority. A secondary source earns credibility to the extent that its information is consonant with personal expectations, experiences and beliefs. Only when a secondary source has been legitimized and earned credibility will its information be accepted as a bona fide augmentation of personal knowledge.

Personal knowledge is communicated in the vernacular of the actor intent on establishing, maintaining and expanding his power for action. The intent is to distill the essence from what has already been experienced and to communicate this wisdom to other actors who may profit from the prior experience of others. The emphasis is more on describing "what works" than on explaining "why something works." The authenticity of the communicated personal knowledge depends on the credibility of the communicators. As Marshall McLuhan so aptly put it, "the medium is the massage" (5). Personal knowledge, being based on private experience, cannot be directly verified. Thus, the validity of communicated personal knowledge of others is judged more by the veracity of the communicator than the inherent logic of the message. Credibility of the communication depends largely on the degree to which there is a commonality of shared experience. Experimental accounts are credible to the extent that their authors have trod the same paths and experienced similar problems. The pragmatic test is that "you've got to have been there to know how it is."

Processed Knowledge

Processed knowledge, in contrast to personal knowledge, is based on symbolic abstraction of reality. The intent of processed knowledge is to simplify the knowing of a complex reality by building abstract structures in the form of models. Models are a formal logical structure employed to generate expectations about real world events. In distinction to the implicit and private rules for organizing experience into personal knowledge, models provide explicit organizational rules open to public scrutiny. The utility of models depends upon the extent to which expectations generated by the model are useful for a particular purpose. Models serve two distinct purposes: the need to anticipate future events so that appropriate action can be taken and the need to control future events.

Models are based on fundamental assumptions. For example, the model of orthodox competitive labor markets is based on the assumptions that: both employers and employees have complete wage and job opportunities information about the market; employers and workers are rational in the sense that they make optimizing decisions; no employer or worker unit controls the market; labor and other factors of production are completely

mobile; employers and workers do not act in concert; and labor is homogeneous and interchangeable within a given market. Such assumptions need only approximate real world conditions in order to be useful. Levitan, Mangum and Marshall (1972) admit that "labor is not perfectly mobile, though it is mobile enough to produce a rough tendency for wages to be equalized throughout a market area" (6, p. 201).

Most models assume an ideal world that continually moves toward equilibrium and harmony. Although the real world is admittedly turbulent and dynamic, most models are static and assume a harmony of interests with optimum benefits accruing when all forces are counter-balanced. The justification is that ". . . the model world provides a benchmark against which we can measure the dynamics of the real world" (6, p. 201). Deviations from equilibrium are regarded as imperfections which should be removed by policies designed to make the system operate more effectively; i.e., policies that move the system toward equilibrium.

Model builders seek simplicity. The more complex the relations, the more desirous they are of parsimony. Milton Friedman, the noted economist, advocates this position by stating:

> The choice among alternative hypotheses equally consistent with available evidence must to some extent be arbitrary, though there is general agreement that relevant considerations are suggested by . . . criteria [like] "simplicity" . . . A theory is "simplier" the less the initial knowledge needed to make a prediction within a given field of phenomena, . . . A hypothesis is important if it "explains" much by little . . . (7, p. 10, 14).

Models are assumed to be universal in their application. All markets, at least in theory, are assumed to be perfectly competitive. All employers are assumed to be motivated by the profit motive. Uniform criteria are assumed to be employed to rank workers for jobs according to their skills. Young blacks in northern ghettos are assumed to be motivated by the same incentive to invest in themselves as are middle-class whites. All individuals are assumed to make optimizing decisions with respect to educational investments.

Models must of necessity be partial and selective in their coverage. Their intent is to explain the most frequently encountered experience. Hence, models are most frequently developed to explain that which is already known. Models often have a short life and are modified and replaced as new unexplained experiences are encountered that challenge their utility. Orthodox economists, for example, in attempting to explain the continuing persistence of wage, income and employment differentials between racial groups have ". . . kept extending and expanding the concept of productivity, incorporating a wide variety of essentially neglected phenomena within the framework of productivity analysis" (3, p. 39).

Models use aggregated data. Central tendencies are explained leaving large gaps of ignorance about the variability surrounding a summary statistic. The fact that the average family has 2+ children and $15,000+ annual income tells little about the complexities of modern American family living.

These different perspectives create a crisis of knowledge between the expert and the actor. The expert is expected to understand those "fundamental laws" that govern the behavior of persons, organizations and society. His models are supposed to give him the power to foretell the future and to recommend ways to avoid the undesirable and achieve the desirable. Yet, in Friedmann's words,

> A yawning gap of non-communication separates his [the expert] world of learning from the world of acting. The rules that govern the behavior of these two worlds have nothing in common. The requirements of learning bind the expert to the constant examination and re-examination of his data at the level of theory and experiment. The requirements of action bind the potential client [actor] to pragmatic tests of what will work (4, p. 109-110).

Friedmann goes on to juxtapose the worlds of expert and the actor. The expert works with abstract models under controlled artificial conditions; the actor works with pragmatic models of a shifting reality. The expert's world is largely unconcerned with politics and power; the actor's world accepts politics and power as a sine qua non. The expert searches for universal lawfulness and order; the actor is committed to strategies of risk-taking to minimize immediate losses. The expert seeks the critical view of his peers; the actor seeks to keep others uninformed of his strategies. The expert is content with probabilistic solutions and approximations of universal applicability; the actor is concerned with deterministic solutions to unique problems. The expert interprets the past; the actor influences the future. The expert is free of time constraints; the actor is dictated by time. The expert is a specialist who deals with a limited branch of knowledge; the actor is a generalist who must deal with many aspects simultaneously. The expert looks for recognition; the actor for payoff in terms of profits and power.

Thus, the worlds of the actor oriented to the acquisition of power and the expert oriented to the acquisition of knowledge are separated. Men of action do not understand problems as formulated by men of knowledge. The expert is charged with not knowing the real world and what will work. The actor is charged with inability to understand and deal with problems in a rational manner.

Manpower Planners as "Experts" and Vocational Educators as "Actors"

Manpower planners tend to function as experts and vocational administrators as actors. Vocational administrators, as actors, tend to

be suspicious of manpower data produced by methods they may not understand, provided by people whose credibility they question and who are serving purposes possibly contrary to their own.

Manpower data are generally quantitative and often presented as formidable tabular arrays of numbers. The numbers carry an aura of authoritarianism and arbitrariness--a supposition that a complex interplay of forces can be compressed into a single point. A prognosis of 120 job openings available state-wide each year for vocational agriculture program graduates, a state-wide prediction that three auto accessory installers are required annually in a state of over 11 million population, and a forecast of no job opportunities for telephone lineman and splicers in a standard metropolitan area of nearly five million strain the credibility of the source, especially if the want-ad sections have currently carried announcements for those occupations.

Manpower planners within vocational education agencies are usually not co-jointly responsible for administration of vocational programs. Often the planners are physically as well as psychologically separated from the program administrators, being located in separate organizational units. The planners tend to be a "new-breed" in vocational education. They are likely to speak a technical jargon about such things as optimization, linear programming, dynamic simulation, and batch processing and to use esoteric symbols and graphic displays such as flow diagrams, PERT charts, and decision trees. They provide data but often not the practical suggestions needed to relate the data to administrative problems in a manner that the administrator can comprehend.

Vocational administrators in positions of authority generally tend to be older. Their formal education has usually been in vocational education with specialization in one of the major program areas. Their exposure to quantitative methodology, particularly as it applies to administrative decision-making, has tended to be limited. Because they bear responsibility for programmatic decisions, they have the problem of deciding how much information is necessary for control, how necessary it is to supplement "soft" personal knowledge with "hard" processed knowledge and how to maintain an adequate flow of relevant information.

These decisions, in part, depend on the credibility of the information source. Vocational educators, as actors, trust data in direct proportion to their trust of the source. Data obtained by personal involvement are generally the most trusted. Thus, data on manpower requirements obtained from personal observations are preferred, e.g., personal contacts with employers, local surveys of employer needs, and analysis of help-wanted newspaper ads. Acceptance of data from secondary sources depends upon the source credibility. Data from local advisory boards, Chambers of Commerce, manufacturers' associations, the Grange and other local sources are generally more acceptable than data from statistical publications. This is partially due to the belief that sources closer to the site of employment have a better understanding of their future needs and partially due to a preference for explicit personalized

data in the form of employer estimates of future need rather than impersonal predictions from abstract models whose assumptions are often poorly understood.

Vocational administrators are seeking to maintain and extend their influence in governmental agencies where decisions on program and funding patterns are made. Information is regarded as a source of power and control. Information detrimental to programmatic goals and individual ambitions may prove more costly to have than not to have. Thus, the administrator, as opposed to the planner, often has a vested interest in that which he husbands. Since the program administrators rather than the planners administer program funding, favorite programs are more likely to be maintained even though manpower demand information may indicate decreased programmatic emphasis. Or it may be that state agency personnel cannot or do not choose to use state control to override local prerogatives. This brings us to a discussion of the next influencing factor.

Factor III: Local Autonomy - State Centrality

Local autonomy is the delegation of state constitutional powers of government to a local governmental unit. The degree of local autonomy with respect to legal prerogatives, financing, taxation, and organization structure influences the kind and extent of vocational education program planning. The balance of power existing between local and state educational agencies determines the degree to which programs are planned, initiated, and delivered to meet local needs. Strong state agency control is manifested in centralized definitions of program needs, goals, and objectives as well as imposed constraints on local program delivery in the form of organizational, curricular, and financial limitations. Local autonomy is manifested in strong self-determination, voluntary compliance with state policies and plans, and an emphasis on facilitation and coordination as the major role of state education agencies.

Local Autonomy

Strong local autonomy frequently results in programs based on local need. Local school boards are often more supportive of programs that serve more immediate employment needs. Since local employers are the constituency for many vocational programs, programs are planned and evaluated according to their needs. Local craft and advisory committees are used, sometimes to the extent of draining the lay resources of the community. These advisory groups serve two major purposes; first, they provide a source of information that is personally known and, thus, credible; and, second, participation in educational planning and policy-making is a pragmatic device for ensuring continuing cooperation from employers as clients for the educational products. Furthermore, program administrators, who are also the planners in many local agencies, find it difficult to justify

expenditures of local funds to support programs which are not relevant to those business and industry interests whose taxes support the school. Programs tend to be less responsive to area and state needs with consequent cost to the students in terms of restricted career opportunities. Restricted occupational choice, coupled with limited job vacancies and inflexible program offerings, causes students to be either locally underemployed or ill-prepared for a wide variety of jobs elsewhere.

Programs oriented to local needs result in program duplication in communities serving the same general labor market. Since many rural labor markets have limited capacity to absorb program graduates, and programs once started are not easily terminated, supply often exceeds the demand on a local level. Local school budgets are often insufficient to support assessment of needs, particularly with respect to future growth. Employer surveys of future employment needs depend on the employer's ability to forecast accurately future needs--an assumption which is not universally accepted (8). Efforts to collect basic planning data on student enrollments, student needs and local manpower requirements are costly, not to mention the expense associated with analysis of the data required for program planning and evaluation. Many local education agencies do not have vocational education units, nor do they have the resources, the knowledge or the inclination to secure and utilize data required for constructive vocational education planning.

State aid in most states is based on a per student unit--either average daily attendance/membership or full-time equivalence. The effect is to reinforce the primacy of enrollments in local programmatic decisions. Regardless of the urgency of manpower needs, no school administrator can long afford to offer courses with low student enrollments. Popular programs are also often the most profitable in that the total returns exceed the actual operating costs, thus, in effect, giving the administrators discretionary funds. The offering of popular courses is particularly easily justified if the local administration can point to a good placement rate. A locally popular program that places its graduates could hardly ever be discontinued simply because manpower projections did not show a strong need. Nor would most state vocational agencies challenge such logic without overpowering cause to do so.

Local autonomy is particularly operative in large metropolitan areas. Urban local education agencies frequently have more resources, more expertise, and larger budgets than the state agencies. Since urban vocational needs usually overpower the needs of the balance of state according to almost any criteria, the urban areas are in a position to exert considerable influence on state policy regarding allocation of federal funds. Large urban areas generally have a different need pattern than the balance of state. Urban needs are heavily influenced by population densities, diversity of employment and heavy concentrations of poverty, unemployment and underemployment. Construction costs are greater, transportation problems are more acute and communication patterns more difficult to establish and maintain than in less populous areas. Although

local separation tends to prevail, there is not the consensus of public interests that marks smaller rural communities. Because of sheer size, comprehensive employer surveys are prohibitively costly and logistically unmanageable. Since there is generally no dominating business and/or industry as in a smaller community, there are no clearly identifiable sources to tap for personal knowledge of manpower requirements. Identical programs tend to be offered by different schools for the same labor market under the rationalization that the market is elastic and will absorb the output.

One effect of local autonomy is to polarize the state on a rural-urban axis. State legislatures, historically dominated by rural interests, have influenced the policies and directions of state executive agencies. Autonomy of the large urban areas has left state agencies to represent the residual balance of state interests, which are primarily rural. These two factors plus the fact that state consultative services are needed more by rural than urban local agencies have oriented state vocational education agencies toward the rural-small town manpower needs. A rural-small town orientation emphasizes the significance of the land and locality as the place where most significant life events unfold. Their emphasis is reflected in the continued strength of vocational agriculture and home economics and the argument that graduates of vocational programs seldom migrate far from their home territory.

State Centrality

State centrality as opposed to local autonomy assures strongly centralized state governmental power. The primary orientation is toward the meeting of compulsory targets. The role of the expert is to develop comprehensive plans which become the blueprints for target attainment. The role of the bureaucrat is to administer operationalization of the plan to achieve targeted objectives. Generally, sanctions are employed to punish deviation from planned behavior and to reward compliance. Information is required to monitor output, to compare output with the target and to take corrective action when the deviation becomes too large.

The degree of autonomy or centrality affects the agency's linkages with other agencies, which is the subject of the next factor.

Factor IV: Agency Isolation - Agency Cooperation

Agencies, like people, have a style of operation that influences their choice of action taken in response to demands. The agency's response to external situations demanding attention takes place against a context of operations. This context of operations consists of the agency's current operational policies, current organizational goals and objectives, understanding and appreciation of external constraints and a general perception of how such situations should be handled. The process whereby the

agency translates knowledge about the situation into action to alleviate the situation is influenced by this context. The operational context serves as a frame of reference which tends to define the class of situations with which the agency has the authority to deal, the power it has to mobilize resources to deal with these situations and the general goals that should be served.

The communication between two agencies depends upon the extent to which the agencies have a shared context of operations. Agencies which are similar in their context of operations tend to have compatible views regarding which situations are the agencies' purview and the appropriate actions that should be taken. Cooperative action is more likely to occur since both share similar perspectives. Conversely, agencies with dissimilar contexts of operation are more likely to be concerned with maintenance of jurisdictional boundaries, particularly if both are responding to the same class of situations.

Vocational education administration and the Department of Labor are both concerned with manpower development. Vocational education received its initial mandate in the Smith-Hughes Act of 1917 to prepare people "for useful employment." The general supposition was that education increases employability and employment increases income. Subsequent legislation in 1963 and again in 1968 redirected the emphasis from education to meet the training needs of those ". . . who are preparing for a trade or industrial pursuit . . ." (PL 347 Sec. 11) to preparation for employment that ensures that:

> . . . persons of all ages in all communities of the State . . . will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests and ability to benefit from such training (PL 90-576, Sec. 101).

The Department of Labor, through the Bureau of Apprenticeship and Training, also has a vested interest in training for employment. The basic idea of the apprenticeship program is to integrate on-the-job training under a master craftsperson with formal classroom training generally provided through the public schools.

The 1960's witnessed the emergence of remedial manpower programs. A growing concern with unemployment as a public policy issue and the Johnson administration's war on poverty combined to produce manpower programs aimed at remedying the difficulties of those already in the labor market. According to Levitan, et al., "The role of training in the manpower programs was shaped by three successive debates, each going to the causes as well as the cures of unemployment" (6, p. 326). The first issue centered on whether structural unemployment or deficient aggregated demand was the primary cause of poverty and underemployment. If caused by structural unemployment, then the obvious cure would be to upgrade the job skills of the unemployed and underemployed. If caused by deficient demand,

then the policy alternative would be monetary and fiscal policies designed to stimulate the economy to create more jobs. The passage of the Manpower Development and Training Act (MDTA) and the Economic Opportunity Act (EOA) resolved the issue in that both were based on the assumption that "If people had skills, they could get jobs" (6, p. 326). The second debate hinged on whether institutional obstacles or individual skill differences were the major impediments to employment. Whereas MDTA institutional training emphasized individual deficiencies, the Concentrated Employment Program and the NAB-JOBS program concentrated on obstacles inherent in employer hiring practices.

The third debate--the most salient one for this discussion--posed the issue on whether national manpower policy should emphasize preventive training for those not yet in the labor market or remedial training for those who are currently unemployed and underemployed. The Vocational Education Act of 1963 epitomized the former position and MDTA the latter. Thus was the stage set for a conflict of values.

The Second Report of the National Advisory Council on Vocational Education (9) characterized the issue as "flow vs. pool." Their contention was that federal concern for reducing the flow of people into the pool of unemployed and underemployed should be at least as great as the concern for reducing the size of the pool. The Council's position was that:

> The allocation of far more Federal dollars to the problem of the pool than to the problem of the flow is wasteful and inefficient. This nation will never reduce its pool of unemployed until the Federal government gives as much attention to reducing the flow as it gives to trying to reduce the pool (9, p. 6).

The Council recommended that as a fundamental policy:

> The Federal government should invest at least as much money in reducing the flow of untrained youth as it invests in reducing the pool of unemployed, and most of the Federal investment should be concentrated in paying the additional cost of vocational and technical programs of career preparation (as compared with programs which prepare for further education) in high schools and postsecondary institutions (9, p. 7).

Thus, the context of operations differs. Vocational education is generally concerned with longer-range preparation for employment. Manpower programs are concerned with more immediate employment of the unemployed and the poor. Vocational education prefers institutional training in the public schools; the Labor Department tends to prefer on-the-job training. Employment security agencies prefer individual referrals to vocational programs; vocational educators prefer more permanent financial support.

Obstacles to cooperative manpower programs result not only from agencies having different context of operations but also from a proliferation of programmatic efforts with crossing lines of authority and responsibility.

Factor V: Revenue-Sharing - Categorical Funding

The delivery of manpower services during the 1960's suffered from a fragmented delivery system marred by interagency conflict and competition. Issues centered on which agencies had jurisdictional prerogatives over clients, what services should be packaged together, what clients should receive priority and what the federal, state and local roles were. For the most part, manpower programs were administered and delivered by state and local agencies. The MDTA program, one of the larger manpower programmatic efforts, was, in effect, a dual program with enrollees receiving either institutional vocational training or on-the-job training by employers. Clients needing service were identified by the employment service and referred to vocational education for institutional training. Because public schools were not always able to satisfy the need for short-term skills training to the disadvantaged, MDTA skills centers were established to integrate basic education with skills training and to provide personal and occupational counseling assistance.

Interagency competition was a natural outgrowth of a fragmented manpower delivery system drawing support from a multiplicity of funding sources. Prevocational training and skills training at one time could receive support from ten funding sources, one-the-job training from five sources, and supportive services from nine sources (6, p. 378). Each funding source generated its own administrative machinery and local constituency. Rules, regulations, application procedures, and contracting arrangements varied widely across funding sources making any state or local approach to integrated manpower planning nearly impossible. Agencies often were in competition for the same clients--public schools, proprietary schools, local employment security offices, welfare agencies, community service organizations, vocational rehabilitation, employers, trade associations, and unions each initiating and offering skills training under a variety of circumstances. Support from external agencies and groups for particular delivery systems tended to promote agency separation and isolationism. Efforts at cooperative area manpower planning resulted in the CAMPS system--an attempt at decentralized interagency planning. However, uncertainties concerning the level of congressional appropriations, charges of federal undercutting of CAMPS objectives, lack of support from participating federal agencies, inability of regional offices to deal with state plans and the lack of ability for state plans to influence flow of funds blunted the coordination effort.

The passage of the Comprehensive Employment and Training Act of 1973 (CETA) marked an end to categorical funding of manpower programs. The Act authorized comprehensive manpower services for the disadvantaged,

unemployed and underemployed to include outreach, assessment, referral, orientation, counseling, education, supportive services, institutional skill training, on-the-job training, public service employment, Job Corps, special federal programs, allowance payments to trainees, payments to employers to encourage hiring, evaluation, demonstration, research, development of labor market information and job bank and job matching activities (10). Financial assistance is made available to prime sponsors which may be states, units of government or combinations of units of government which have a population of 100,000 or more, or any other unit specially designated by the Secretary of Labor. Each prime sponsor is required to establish a planning council which is representative of the client community and community-based organizations. The function of the council is to submit recommendations regarding program plans, goals, policies and procedures, to monitor programs, to evaluate programs and to assess community need for manpower services. Each prime sponsor is required to submit an annual plan which describes in detail the services it intends to provide. The plan must make provisions for utilizing:

> . . . those services and facilities which are available, with or without reimbursement of the reasonable cost, from Federal, State, and local agencies to the extent deemed appropriate by the prime sponsor, after giving due consideration to the effectiveness of such existing services and facilities, including but not limited to, the State employment service, State vocational education and vocational rehabilitation agencies, area skills centers; local educational agencies, post-secondary training and education institutions, and community action agencies, but nothing contained herein shall be construed to limit the utilization of services and facilities of private agencies, institutions and organizations (such as private businesses, labor organizations, private employment agencies, and private educational and vocational institutions) which can, at comparable cost, provide substantially equivalent training or services or otherwise aid in reducing more quickly unemployment or current and prospective manpower shortages (PL 93-203, Sec. 105, 3(b)).

Of special interest to vocational education is Section 103 4(c) of PL 93-203 which provides that five percent of the funds available under Title I shall be available to provide vocational education training and service to prime sponsors. The state vocational education board enters into a non-financial agreement with prime sponsors for the provision of institutional training and services. The agreement is non-financial in that no funds are actually transferred to prime sponsors.

The intent of CETA is to decategorize and decentralize the previously existing proliferation of remedial manpower programs into one comprehensive program funded by block allocations to state and local governmental units as prime sponsors. The effect has been to deprive state agencies of control of the delivery of manpower services. Passage

of funds directly to local governmental units requires only a plan which meets certain procedural requirements. Full responsibility is vested in the elected officials for the planning, delivery and evaluation of manpower services. Public and/or private profit and non-profit agencies and organizations may be used as service agencies and are answerable only to the elected officials. Distribution of manpower budgets is determined in part by the political clout of the service agencies.

Transference of the decision-making function into the political arena forces old line service agencies to compete for funds on the open market. No longer can they depend on programmatic channels of funding. Instead, they are forced to deal with politicians whose concern with manpower services is determined by their value as measured in the political currency of votes, dollars, patronage jobs and public service. Client groups may not be numerous enough or powerful enough to constitute a significant political constituency. In fact, excessive concern for the disadvantaged may have negative political payoff as indicated by the reluctance of elected local officials to take over community action agencies when given the opportunity under an amendment to the Economic Opportunity Act. Mangum and Snedeker believe that under CETA:

> Community organizations will be guaranteed no significant representation on State and local manpower councils. There will be representatives of target populations on the councils, of course--but such membership usually has proved relatively meaningless. . . . experience has been that client members generally are appointed in token acknowledgement of Federal guidelines as political necessity. Little is done that effectively solicits their involvement, and ordinarily they lack the sophistication to make their presence felt politically (11, p. 7).

The federal-state-local relationship has been significantly altered with the advent of CETA. No longer are objectives federally determined, funds allocated to state agencies on the basis of fixed formulas and federal guidelines prepared for program administration. Instead, CETA is basically a "no strings attached" revenue-sharing approach. Funds are passed to urban and balance-of-state prime sponsors in a single package. Responsibilities for guideline preparation, enforcement, monitoring and evaluation have been delegated to state and local levels. Local prime sponsor planning councils are given the mandated responsibility to submit recommendations regarding program plans, goals, policies and procedures, to monitor and evaluate manpower services and to analyze the need for continuing services. However, their function is purely advisory as CETA provides that ". . . final decisions . . . shall be made by the prime sponsor" (Section 104). The State Manpower Services Council is appointed by the governor and has as its mandated functions: (1) to review plans of each prime sponsor for the purpose of making recommendations for more effective coordination of effort; (2) to monitor prime sponsor programs; (3) to make recommendations regarding suggested improvements in the delivery of manpower services; and (4) to prepare an annual report to the

governor, and conduct and issue other such reports as needed. As with the local councils, the functions of the State Manpower Council are advisory. There are no explicitly stated "carrots or sticks" that the state can use to promote local cooperation in a comprehensive effort to meet state manpower needs nor to ensure continued quality of locally delivered manpower services. The assumption underlying the revenue-sharing approach of CETA is that voters will ultimately hold the elected state and local officials accountable for their stewardship.

Synthesis

The effort in the preceding sections has been an exposition of five factors which are regarded as central to an understanding and interpretation of the complex web of circumstances surrounding the availability and use of manpower data in vocational education. These factors are to be regarded as basic underlying tendencies which predispose the availability and use of manpower data. The factors are useful because they provide a multi-perspective standpoint which can be used to account for the wide variety of observed situations. If, for instance, one were to observe vocational agencies characterized by strong philosophical commitment to student demand, predominant reliance on personal knowledge, strong local autonomy and agency isolationism, then one could reasonably expect to find little use of published manpower data for planning and operating vocational programs. Greater use of manpower data could reasonably be expected in agencies with an orientation more toward the manpower requirements philosophy, less local autonomy and more agency coordination. Greater availability of manpower data can be expected to the extent that revenue-sharing provides new incentives for local planning to meet the comprehensive community manpower needs--both preventive and remedial.

CHAPTER VIII

RECOMMENDATIONS

The availability and use of manpower data for vocational education have been shown to involve a network of national, regional, state and local agencies, some of which have no formal organizational ties with each other. While federal, regional, state and local agencies comprise the system in which manpower data are produced and used, the recommendations contained in this chapter are addressed to those governmental bodies or agencies which are capable of having a nationwide impact on data availability and usage: the United States Congress, the U. S. Office of Education, the Bureau of Labor Statistics, the Manpower Administration and the National Institute of Education. Each recommendation is addressed to a specific agency; however, in some instances the recommended actions involve interagency cooperation and coordination.

The recommendations are classified into three categories. The first category focuses on improving the availability of manpower data; the second focuses on data usage; the third contains recommendations concerning the resources needed to improve data availability and use. In all instances, the recommendations are derived from field observations and are designed to mitigate those conditions and situations believed to impede improved availability and usage of manpower data.

Availability of Manpower Data

Congress should consider:

- *Authorization in the Vocational Education Act of 1975 for the development and use of a nationally uniform vocational education data system.*

This data system should include occupational and labor market manpower information on a national, state, local or other appropriate basis and should be based upon uniform definitions and terminology. Standard definitions of vocational education student, vocational education program, postsecondary vocational education student, adult vocational education student, program completion, early leaver with marketable skills, and related occupational field are necessary in order to ensure national compatibility of data on enrollment, completion, placement and follow-up in vocational education.

- *Legislative requirements that all public, proprietary and home study schools receiving federal support report program completions by appropriate education course codes.*

Information on number of graduates from public and private colleges and universities, junior and community colleges and private vocational schools would improve the quality and quantity of data on manpower supply resulting from the output of education institutions. Currently, data on supply from private institutions are sketchy in coverage and of questionable utility since they are collected by a variety of nonstandardized methodologies. Availability of supply data for private schools would enable a more accurate determination of the supply of trained manpower, would provide a better estimate of the net demand for occupations and would facilitate cooperative planning between public and private schools.

The Commissioner of Education should:

- *Identify exemplary practices in the projection of vocational program enrollments, early leavers, and program completers; disseminate these practices to state and local agencies; and provide technical assistance in implementing projection procedures.*

Sophistication of state attempts to anticipate future program enrollments, early leavers and program completers varies from crude extrapolation techniques to dynamic simulation. There is currently a need for dissemination of state-of-the-art advancements to state and local educational agencies that do not have the resources or the capabilities to plan, design, develop, field test and implement their own projection models.

- *Work cooperatively with the Director of the Census in planning the format of the 1980 Census of Population Subject Report: Vocational Training.*

Manpower planners and vocational educators could benefit substantially from information obtained from the U. S. Census. For example, Question 27a of the 1970 Census asked, "Has this person ever completed a vocational training program?" to be answered "Yes" or "No." Question 27b asked, "What was main field of vocational training?" Alternatives included business, office work, nursing, other health fields, trades and crafts, engineering or service technician, draftsman, agriculture or home economics, and other field (Specify). The format seemingly would have provided more useful information if the alternatives in 27a had been classified according to the two-digit OE instructional program code and had included apprenticeship and OJT as separately designated categories. Also, considerable information would have been obtained by classification of vocational training by levels: secondary, adult, postsecondary.

- *Until such time as program statistics are routinely available from private institutions, make available to all state vocational agencies a directory of the known universe of proprietary vocational schools and provide guidelines and*

technical assistance in designing sample surveys to estimate number of annual program graduates.

A directory of proprietary vocational schools classified by states would identify and locate the proprietary schools in each state. Standardized procedures for designing a sample survey of the proprietary schools to determine program graduates would seem to make supply estimates more comparable from state to state and, thus, would improve the reliability and validity of these estimates for state and local planning.

The Commissioner of Labor Statistics should:

- *Increase the Bureau's emphasis on the provision of labor statistics for local labor markets.*

The need for a comprehensive occupational labor market information system to support educational and manpower programmatic decision-making in local labor markets of less than 250,000 population makes it imperative that such an effort be undertaken. Information at the state and SMSA level is not adequate to meet the needs of vocational and manpower planners. In the absence of locally specific data, users frequently turn to other sources with corresponding loss of field support for the Bureau. The Bureau is faced with the choice of maintaining its present technical standards at the risk of losing the opportunity for increased user support or modifying the standards in an effort to be more responsive to field needs.

- *Develop technical and computer procedures to allow state ES agencies to develop sub-state area industry-occupation matrices with annual update capabilities.*

Given the availability of annually adjusted industry-occupation matrices, the states could use Method B of Tomorrow's Manpower Needs or some suitable modification to obtain small area projections. The availability of information on industry staffing for small labor market areas would provide ES agencies the capability of producing industry-occupation matrices for a broad choice of geographic areas. Although no one geographic area will currently satisfy the needs of all user groups, local area manpower planning regions may represent a level of geographical detail acceptable to both vocational and manpower planners.

- *Provide for annual modification of the projected national matrix for a five-year forward projection.*

Annual modification of the projected national matrix would provide the capability to reflect the anticipated impact of current economic, social and technological changes on future staffing patterns. Annual updating of the projected matrix would increase its credibility and improve the likelihood of use. A projection span of five years is sufficient for the majority of vocational planning needs and represents about the maximum length of time that people believe it is possible to predict future conditions with any reasonable expectation of accuracy.

- *Establish standardized techniques for the projection of employment by industry groupings.*

States are currently using a variety of projection models. The Bureau should, therefore, develop guidelines for the standardization of projection methodology so as to improve compatibility of results.

- *Develop non-technical explanations of BOL labor market concepts and methodologies for disseminating to educators and other client groups.*

There is no doubt that the Bureau has established its expertise in the field of labor market statistics. However, the prevailing image in the field is that BLS and ES labor market information is surrounded by a technical mystique. To improve their credibility with data users having programmatic responsibilities, a dialogue with these users must be established. The first step in the dialogue process is to communicate in an intuitive and easily understood manner the concepts, theories and analysis on which local labor market projections are based.

- *Work cooperatively with the Commissioner of Education to develop guidelines for the use of labor market information.*

Labor market information, in order to be useful for human resources development decisions, must be interpretable within some decision framework that will enable the decision-maker to choose a course of action. The development of this interpretive framework requires cooperative efforts between the Office of Education and Bureau of Labor Statistics. The Office of Education should provide substantive educational input into the development of program planning and evaluation decision rules based on quantitative data. This framework should provide rules and procedures for the integration of data on program enrollments, completions, costs, supply and demand into decisions regarding program initiation, modification or termination. The Bureau should provide expertise in ensuring that the decision procedures are based on an understanding of labor markets and the forces that impact on labor supply and demand, allocation of labor and changes in the nature of work.

- *Provide more labor market information in a narrative format.*

Labor market information should be presented in a narrative context outlining the implications of the data for present and future action. When such information is presented only in tabular or graphic arrays of numeric data, its use by nonquantitatively oriented users is inhibited. In many instances, qualitative information on trends and rates may be of more importance than quantitative estimates of the levels. Projections as point estimates, especially for estimates of 10 or less, tend to present an image of exaggerated confidence in the methodology that invites user skepticism. Projections stated as confidence bands acknowledge the probabilistic nature of the projections and make the results more believable.

The Assistant Secretary of Labor for Manpower should:

- *Expand the client constituency of the OES Program.*

Emphasis on employers has diverted attention from the potential need for current employment data by educational and manpower planners. The needs of these groups can be served more adequately by a program that has sufficient fiscal and personnel resources to allow timely publication and dissemination of OES survey results. Improved public relations is needed to inform client groups of the existence of the program, the nature of the program and how the program can serve their information needs. As evidence of need, vocational educators are frequently unaware that their states are participating in the OES survey.

- *Direct state employment security agencies to publish occupational projections on an annual basis.*

Publication of occupational projections by state employment security agencies should be on a routine schedule coordinated with state plan preparation. Agencies that use manpower data on a regular basis such as in the preparation of annual plans must be able to depend on predictable manpower data delivery schedules. Since both state and local occupational education agencies and prime sponsors are required to submit annual plans, occupational projections should be updated on a corresponding schedule.

- *Improve the dissemination of manpower information to client groups.*

All state ES agencies should be encouraged to prepare and disseminate on a regular basis a catalog of their recent publications. This catalog should be disseminated via a mailing list to the state vocational education agencies, public service agencies, city administrations, and to public schools. All local ES offices should routinely receive copies for local distribution. A person should be identified in the state ES agency as the recipient of all inquiries concerning availability of ES publications. The name and telephone number of this individual should be made known to client groups.

Each major publication, e.g., those containing occupational projections, should have a tear-out and mail-back card that would provide feedback on how well the document met the users' needs and a brief description of the use that was made of the data.

- *Work cooperatively with the Commissioner of Education to establish joint policies to promote coordination of placement efforts and the increased utilization of ES job services.*

Arrangements should be made for the out-stationing of local ES agency personnel in the public schools. All program completers and early leavers entering the labor market could then be registered and subsequent placements credited to ES. Job services provided to students, in addition to placement, should include testing, occupational counseling and job development.

Use of Manpower Data

The Commissioner of Education should:

- *Establish standardized data element definitions and require their use by the states in complying with USOE reporting requirements.*

Standardized definitions of what determines a vocational education student and/or program, a postsecondary student and/or program, an adult student and/or program, program completion, early leaver with marketable skills and employment in a related occupational field are urgently needed in order to make data on the output of vocational education more meaningful. Based on the experience of the National Center for Educational Statistics in the development of handbooks for general education, a Handbook for Vocational Education could be developed. The definitions could be prepared by a general committee that coordinates the developmental work of numerous technical committees whose members represent national, state and local interests.

- *Establish standardized student follow-up procedures to be used by the states.*

The states should be provided specific guidelines concerning sampling procedures, data collection procedures and criteria (e.g., wages, job satisfaction, relatedness to educational programs, etc.) so that "programmatic success" can be mutually understood and uniformly measured.

- *Establish and disseminate to the states a standardized program-to-occupation crosswalk and require its use in state plan preparation.*

Establishment of a standard program-to-occupation crosswalk to be used by all states is urgently needed. A standardized crosswalk would facilitate state and local plan preparation, would make state and local annual comparisons and interpretations more meaningful in that the same procedures would be used, and would improve the quality of demand and supply data for national users. Most state plans do not make explicit the procedures used to match vocational program supply with occupational demand nor are the regional USOE staff generally aware of exactly how the states arrived at the supply/demand figures contained in Table 1 of the state plans. A standard occupation classification system should be used. Until an SOC is developed, Occupational Employment Survey classification of occupations appears to be at an appropriate level of specificity for the demand side. The DOT definitions are considered by many vocational educators to be much too detailed for their planning needs.

- *Work cooperatively with the Commissioner of Labor Statistics and the Assistant Secretary for Manpower to develop training packages to assist local vocational educators in the uses of manpower data in program planning.*

Training packages should be developed and state vocational educational agency personnel trained in their use. This package should (1) discuss how to secure local involvement in the planning process, (2) describe the implications of various trends or changes in manpower data for programmatic decisions (e.g., what the implications are for program initiation, expansion, contraction or termination), (3) present systematic procedures for verifying or modifying state-wide labor market statistics to reflect local conditions, and (4) delineate the possible sources of data available to the local planner. In this way, state agency personnel would be trained to assist locals in the systematic use of manpower data for program planning and evaluation.

- *Establish further contact with national employer organizations to explore development of training guidelines for involvement and functioning of employers in local vocational education advisory groups.*

Extended contacts with national organizations such as the National Association of Manufacturers, Chamber of Commerce of the United States, and American Society of Training Directors should be established for the purpose of developing procedures to increase the involvement of local employers in vocational education advisory committee activities. Increased employer involvement and participation in program planning and evaluation would help keep program offerings more in accord with labor market needs.

- *Require that Table 7 in the state plans for vocational education classify vocational programs by six-digit OE codes.*

Six-digit OE codes would allow for a more precise match between programs and specific occupations. Classification of demand, supply and net demand by six-digit program codes would provide a more comprehensive assessment of the current and future manpower needs for vocational educational program offerings.

- *Re-examine the allocation formulas being used by the states to disburse Vocational Education Act of 1968, Part B, funds to local education agencies.*

The allocation procedures being used by the states should be examined in order to determine the extent to which they reflect the intent of the legislation. Particular attention should be given to (1) the relative weightings assigned to (a) manpower needs and job opportunities, (b) difference in vocational education needs, (c) relative ability to provide resources, and (d) relative costs of programs, services and activities; and (2) the procedures used to measure these required criteria.

- *Provide the regional offices with additional staff and resources to provide technical assistance to state educational personnel on the availability and use of manpower data.*

Regional offices should provide more assistance to state vocational educators to facilitate better usage of manpower data currently available from BLS and state ES agencies. Such assistance could take the form of personal assistance, technical guidelines, workshops and conferences.

- *Work cooperatively with the Commissioner of Labor Statistics and the Assistant Secretary of Labor for Manpower to develop occupational clusters for use in program planning, curriculum development, and facilities planning.*

The Commissioner of Labor Statistics should:

- *Work cooperatively with the Commissioner of Education to develop occupational clusters.*

Clusters of occupations should be empirically derived from cluster analyses of similarity of measured occupational performance requirements and worker characteristics. These clusters should be formed from those occupations constituting a Standard Occupational Classification (SOC) and should be interrelated with OE program codes. Once derived, these clusters could form the basis for a standardized guidance and counseling system.

- *Organize the coverage of the Occupational Outlook Handbook around the empirically derived clusters.*

For each occupational cluster, information should be provided on the employment outlook, nature of the work, training, requirements for entry, line of advancements, working conditions, and human performance requirements.

The Assistant Secretary of Labor for Manpower should:

- *Work cooperatively with the Commissioner of Education to develop occupational clusters.*

- *Energize a program calculated to enhance the image of ES agencies with respect to the public schools and other public service agencies.*

The Manpower Administration should initiate efforts to further improve the ES image with local public service agencies and local governments. This effort could be accomplished by initiating a program similar in intent to the Employer Service Improvement Program (ESIP)

but focused on public agencies rather than employers as the client constituency. Sponsorship by local civic groups including boards of education could be obtained, and an ad hoc committee of the local public agency could be established to identify local problems and to recommend improvements in ES practices. As with the ESIP effort, a task force of local agencies could be constituted and given the responsibility of developing a plan of action for implementing recommended improvements in local office practices. This program coupled with current ESIP efforts could be expected to result in extended and improved utilization of ES services.

- *In cooperation with the Commissioner of Education and the Director of the National Institute of Education, design, develop, field test and implement in local employment security offices a comprehensive occupational information system for individual clients.*

This comprehensive occupation information system should be designed to assist individual clients in their career decision-making by identifying, collecting and providing useful information. System informational components should include:[6] locational information on area employers; occupational distributions by area employers; establishment of employment potential for special workers' groups by occupations; job vacancies by establishment; hiring requirements by occupations; characteristics of workers customarily hired by occupation; anticipated changes in characteristics of workers customarily hired; description of typical job duties by occupation; anticipated changes in description of typical job duties; anticipated short-term demand and supply for the occupation at local, state, regional and national levels; anticipated long-term demand and supply for the occupation at local, state, regional and national levels; local area economic outlook; wage and salary information by occupation; directory of local community service organizations; description of services offered by local community service agencies; listing of educational and manpower development institutions; listing of human resources development programs offering education or training by related occupation; apprenticeship opportunities by establishment and by occupation; licensing and/or credentialing requirements by occupation; available community transportation facilities.

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[6]The proposed design of the system is patterned after that suggested by Lawson, R. S., Perspectives on the Development of a Comprehensive Labor Market Information System for Michigan, Methods for Manpower Analysis No. 6, The Upjohn Institute, 1973.

Resources

Congress should consider:

- *Authorization in the Vocational Education Act of 1975 for the annual transfer of an amount not less than $5,000,000 to the Secretary of Labor to finance the development of a comprehensive system of labor market information on a national, state, local or other appropriate basis for public use and for the use and guidance of federal, state and local officials and of advisory councils charged with responsibility under this Act.*

- *Establishment of a Manpower Information Coordinating Committee consisting of the Commissioner of Education, the Commissioner of Labor Statistics and the Assistant Secretary of Labor for Manpower, and empowerment of the Committee with administrative authority over the utilization of funds transferred to the Secretary of Labor.*

- *Authorization of funding in the Vocational Education Act of 1975 for a Manpower Information Coordinator to be employed by each state vocational education board.*

The Manpower Information Coordinating Committee should be advised by a council consisting of equal representation from the National Commission for Manpower Policy and the National Advisory Council on Vocational Education. It should be the function of the Manpower Information Coordinating Committee to delineate the functions and responsibilities between DOL and USOE for the development of an occupational and labor market information system. The Manpower Information Coordinating Committee should be empowered to establish technical committees consisting of representatives from the Department of Labor; Department of Health, Education and Welfare; Department of Commerce; Department of Agriculture; Department of Defense; and the Veterans' Administration. It would be the function of the technical committees to establish a program for (1) the development of a labor market and occupational information system in accordance with the policies and directives formulated by the Manpower Coordinating Committee and (2) the systematic dissemination of labor market information from information producers to users. Systematic dissemination might include establishment of a clearinghouse for labor market information which could include data and research results.

The organization would extend to the regional level. In each federal region, there should be established a Regional Manpower Information Coordinating Committee. The purpose of these committees would be to provide a formal organizational linkage at the regional level between the Department of Labor and the Department of Health, Education and Welfare. These committees would function as a liaison between the national level and the states. The regional committees would have responsibility for implementation of the system in the states, provision of training and other technical assistance to the states and

monitoring of system performance. States would be encouraged to develop working liaison committees at the state and local levels between vocational education agencies and employment security agencies. It would be the function of the Manpower Information Coordinator in each state to work cooperatively with state and local employment security agencies and local education agencies through the various liaison committees to improve the availability and use of manpower information.

On August 22, 1975, an interagency agreement for the development of occupational manpower information was negotiated by Manpower Administration, Bureau of Labor Statistics and Office of Education. The purpose of the interagency agreement ". . . is to establish the national leadership essential to coordinate legislatively mandated activities related to occupational manpower information." A copy of the agreement is contained in Appendix C. The agreement calls for the establishment of an Occupational Manpower Information Coordinating Committee which is similar in intent to the Manpower Information Coordinating Committee herein recommended. However, the committee established by the interagency agreement has no legislative sanction, nor is any funding specifically provided by the signatory agencies.

- *A legislative requirement in the Vocational Education Act of 1975 that the state vocational board shall not provide financial assistance under the Act to any local education agency unless such agency has participated in the development of a comprehensive program plan for an educational planning region. An educational planning region for purposes of the Act may be a geo-political unit or combination of geo-political units which has a combined population of 100,000 or more persons on the basis of the most satisfactory current data available to the Commissioner of Education.*

This requirement would encourage cooperative regional planning of vocational education programs. An annual and five-year regional plan prepared and submitted to the state vocational board would reduce regional duplication of program offerings, would focus regional educational resources on regional human developmental needs, would tend to promote regional assessment of developmental needs, would enable more efficient use of planning resources since only one plan would have to be prepared for each region, and would facilitate preparation of the state plan which could be more readily synthesized from the reduced number of regional plans. Regionalization would result in more specifically tailored regional manpower estimates since the size of the region would permit direct application of existing DOL projection methodologies. More efficient utilization of state vocational education agency planning expertise could be made in that state agency personnel could interact with planners at the regional rather than the local level. Finally, this would improve the articulation between secondary and postsecondary vocational program offerings.

The Assistant Secretary of Labor for Manpower should:

- *Allocate an annual amount not less than the annual amount transferred under the authority of the Vocational Education Act of 1975 for the purposes of developing a comprehensive occupational and labor market information system on a national, state, local or other appropriate basis.*

Allocation of DOL funds to the development of an occupational and labor market information system is justifiable in that the system is to be designed to serve the needs of both the Department of Labor, as mandated under CETA, Sec. 312(a), and the Office of Education, as mandated by the Vocational Education Act of 1975 as previously recommended.

- *Extend the coverage of the OES survey to all states.*

Comprehensive national coverage of the OES survey would enable standardized collection of current data on employment by occupations for all states. Technical assistance should be provided the states to enable them to develop industry-occupation matrices based on OES data for each of the educational planning regions established under the provisions of the Vocational Education Act of 1975, as previously recommended.

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APPENDICES

APPENDIX A

METHODOLOGY

The general design and operational procedures that were used to collect the information which served as the basis of this report are described below. The three major components of the methodology which will be discussed are (1) instrument development and interviewer training, (2) sample selection, and (3) data collection.

Instrument Development and Interviewer Training

A structured interview technique was selected as the most appropriate method for collecting information relevant to the availability and use of manpower data in vocational education. This approach was chosen for three reasons. First, the type of information needed was highly detailed and not amenable to recording in a survey questionnaire. Second, it was assumed that since much of the information being sought would relate to agency practices which could be "sensitive," accurate information was more likely to be obtained through probing by the interviewer than through a simple paper and pencil approach. Finally, the addition of a human element to even the best developed questionnaire allows for an opportunity to follow-up conditional responses and to obtain detailed information concerning unique local practices.

Because of the large number of agencies involved in the development and utilization of manpower data, a number of different interview scheduled (questionnaires) had to be developed. Relevant items and questions for inclusion in the schedules were identified by Center personnel in collaboration with consultants who were currently or formerly affiliated with the U. S. Office of Education, the Department of Labor, the National Advisory Council on Vocational Education, state vocational education agencies, vocational education institutions, consulting organizations, research coordinating units and universities. Items were logically sequenced into questionnaires, resulting in 19 unique questionnaires tailored to various positions within the agencies to be visited. Identical items were contained in several questionnaires to be used in a single agency, thus allowing for some measure of response reliability.

The 19 questionnaires were reviewed by three independent consultants. Minor modifications were made to clarify the intent of some of the questions and to add items where gaps had existed in the sequencing of questions. Interview guides were then developed to accompany each questionnaire. These guides explained the intent of each question and helped to standardize the interviewing procedures. In addition, all Center staff who were to administer the questionnaires went through a

three-day interviewer training session conducted by a survey research firm. This training session served to standardize further the interviewing procedures and probing techniques.

Upon completion of questionnaire development and interview training the instruments were field tested in the North Carolina State Agency of Vocational Education, local vocational education agencies, and the North Carolina Employment Security Commission. This process resulted in a few modifications in the questionnaires and enabled the Center staff members to become more familiar with item sequencing and standardized probing techniques. In no way was the intent of any question changed, but the format was improved to help reveal the data most needed. A sample questionnaire is presented at the end of this section.

Sample Selection

It was obvious in the planning of the project that not all 50 states could be visited; hence, the following procedure was developed for sampling states and localities to be visited during the course of the project.

In the earliest phases of the project it was decided that all of the regional offices of USOE, BLS and Manpower Administration should be visited. Representatives from these agencies in Washington, D. C., served in an advisory capacity during the entire duration of the project, and from discussions with these individuals it was decided that one state in each of the ten federal regions should be selected for the purposes of the study. The states were to be selected by the regional offices of USOE, BLS and Manpower Administration. For each of the ten federal regions the regional office directors were asked to identify exemplary states within their region with respect to the use of manpower data in vocational education planning and operations. Each regional office director was asked to identify the top three states in the region. They were later informed of the choices made by the regional directors of the other agencies, the relative merits of each state were discussed, and consensus was ultimately achieved in all ten regions regarding the state which should be visited.

Once the ten states were identified, the next step was to apprise the state vocational education and employment security agencies of the selection of their state for inclusion in the study and to obtain from them their assurances of assistance in supplying data pursuant to the study. Approval was voiced by all who were contacted.

In addition to the state vocational education and employment security agencies to be visited, within each state two secondary and two postsecondary local vocational education agencies were also to be visited. These local agencies were selected by the state director of vocational education or his equivalent. To the extent possible, an

attempt was made to select an equal number of urban and rural local education agencies at both the secondary and postsecondary levels. Thus, within each state visits were to be made to an urban secondary system, a rural secondary system, an urban postsecondary system and a rural postsecondary system. In all cases the state directors of vocational education were asked to select local agencies they felt were exemplary in the use of manpower data or would in other ways be worth visiting given the purposes of the study.

Four local employment security offices were also to be visited in each of the ten states. They were selected on the basis of their proximity to the four local vocational education agencies which were to be visited. In a few states only three local employment security offices were actually visited because two of the vocational education agencies were served by the same local ES office.

In summary, the regional offices of USOE, BLS and Manpower Administration selected one state per region as being exemplary in the availability or use of manpower data in vocational education. In each of the ten designated states the state director of vocational education, or his equivalent, selected two secondary and two postsecondary local vocational education agencies for visitation. Local employment security offices were then selected on the basis of their proximity to the four local educational agencies. In addition to the interviews with state and local personnel from employment security and vocational education agencies, within each state interviews were also conducted with the executive director of the State Advisory Council on Vocational Education and the executive director of the State Manpower Services Council.

Data Collection

Prior to the visits to the states each of the ten state directors of vocational education was contacted by both the USOE regional office serving that state and the Center for Occupational Education to explain the purpose of the study and reason for the selection of their state. Their assistance was requested, and as previously noted, all of them agreed to take part in the study. The state directors were requested to provide the Center with copies of their most recent state plans for vocational education and any other relevant documents that might facilitate our understanding of vocational education in their states. These documents were reviewed by the Center staff who would be visiting the states so that they would be in a better position to make the most efficient use of the valuable state agency staff time that was being granted them.

Approximately three weeks prior to a visit to a state, telephone contacts were made with the regional offices of USOE, BLS and Manpower Administration, the state director of vocational education and the director of the state employment security agency. These telephone contacts were primarily for the purpose of scheduling appointments but

they also served to explain further the purpose of the study. Two to three hours per interview was anticipated (some lasted more than four hours), so it was imperative that the agency personnel be given adequate lead time to schedule a large block of uninterrupted time. Furthermore, the trips to the states had to be scheduled at a time when all of the key people we wished to interview would be available, which caused some delays in the visits to certain states.

In almost all cases the visits to the states were immediately preceded by visits to the regional offices of USOE, BLS and Manpower Administration. In several instances the regional offices were located in the state which had been selected for its exemplary use of manpower data, and this greatly facilitated the scheduling of appointments since it allowed for greater flexibility. Most of the visits required two to three weeks to complete visitations of both the regional offices and the state and local agencies. At least two Center staff members went to each state. More than one man-month was spent collecting data in each of the ten federal regions.

Interviewers took extensive notes during each interview and used a small tape recorder to record the entire session. In all cases the interviewer first asked for consent to use the recorder prior to turning it on, and in no instance was permission denied. The recordings were used to supplement the interviewer's notes so that the session would not be lengthened because of slow note-taking. The tape recorders were especially useful in those sessions where several agency personnel were present.

All of the individuals who were interviewed were assured that neither they nor their state would be mentioned by name in the final report. This was done to encourage them to speak frankly about problems and to let them feel more at ease with the tape recorder. We sincerely believe that the vast majority of the people interviewed were quite candid and that our commitment to their anonymity is partially responsible for this. Unfortunately, such anonymity has its costs, and in this case it prevents us from pointing to those states and individuals who are doing truly exemplary work that deserves the attention of others across the nation.

Approximately 25 people were interviewed in each of the ten regions. Listed below are the positions of the individuals most likely to have been interviewed, followed by a copy of one of the questionnaires.

Regional Level

Director of Vocational, Technical and Adult Education, USOE, and individual(s) responsible for state plan review;

Director of the Manpower Administration and/or his assistant;

Director of the Bureau of Labor Statistics and/or BLS employees most familiar with existing manpower data.

State Level

State Director of Secondary Vocational Education;

Director of Planning for secondary vocational education and the individual(s) responsible for state plan preparation;

Director of Program Operations for secondary vocational education;

Staff most familiar with the secondary vocational education management information system;

State Director of Postsecondary Vocational Education;

Director of Planning for postsecondary vocational education and the individual(s) responsible for state plan preparation;

Director of Program Operations for postsecondary vocational education;

Staff most familiar with the postsecondary vocational education management information system;

Executive Director of the State Advisory Council on Vocational Education;

Director of the State Employment Security Commission and/or ESC staff responsible for the development of manpower data;

Executive Director of the State Manpower Development Council;

Local Level

Two local directors of secondary vocational education;

Two local directors of postsecondary vocational education;

Four local directors of employment security offices and/or their assistants.

POSITION: STATE DIRECTOR OF SECONDARY VOCATIONAL EDUCATION

CODE: 04 REGION NO. _____

NAME OF AGENCY: _____

_____

LOCATION: _____

_____

_____

PERSON BEING INTERVIEWED AND TITLE: _____

_____

PHONE: _____

DATE: _____

NEED TO RESCHEDULE: YES/NO TIME _____

HANDOUTS: 1 STATE DIRECTOR OF SECONDARY VOCATIONAL EDUCATION

INTERVIEWER: _____

STATE DIRECTOR OF SECONDARY VOCATIONAL EDUCATION

1. (a) Is the state agency organizational chart in the State Plan currently operational?

GET COPY.

(b) How many full-time equivalent professionals are there in your agency?

(c) How many of these professionals are primarily involved in planning?

(d) Who in your agency is primarily responsible for

(1) program planning?

(2) program operations?

(3) acquisition and distribution of manpower data?

(4) the agency Management Information System?

2. What are the functioning organizational linkages between the secondary and postsecondary state level vocational education agencies?

FORMAL AND INFORMAL.

FREQUENCY OF MEETINGS.

SUBJECTS DEALT WITH.

COMMITTEE MEMBERSHIP.

REASONS FOR LACK OF.

RECOMMENDATIONS.

3. What are the functioning organizational linkages between the secondary vocational education agency and the agency responsible for the secondary academic programs?

FORMAL AND INFORMAL.

FREQUENCY OF MEETINGS.

COMMITTEE MEMBERSHIP.

SUBJECTS DEALT WITH.

REASONS FOR LACK OF.

RECOMMENDATIONS.

4. What means do you have for effecting statewide policy changes? For example, if you wanted to enable vocational administrators to make use of industrial arts facilities and personnel in short-term training for single skill jobs, what would you have to do?

PLANNING

5. (a) What procedures does your agency use for setting statewide vocational education goals? (who is involved? when do they meet? advisory committee's role?)

(b) Are program goals state or locally initiated?

(c) How do you ensure that vocational education goals at the local level are responsive to statewide manpower needs and goals now and in the future?

GUIDELINES.

RESTRICTIONS.

STATEWIDE
COORDINATION.

REGIONAL PLANNING
COUNCILS.

6. What are the usual and recommended procedures for establishing a new curriculum?

(a) In starting a new program (several curricula)?

(b) Expanding a curriculum?

(c) Terminating a curriculum?

WRITTEN
DOCUMENTATION.

7. What influences do you bring to bear upon program/curriculum terminations at the local level? (Get examples)

CAN STATE INITIATE?

CAN STATE TERMINATE?

EXAMPLES.

8. What specific services does your agency provide to assist in local planning?

GUIDELINES.

PERSONNEL.

DATA.

EXAMPLES.

9. Are there any statewide policies requiring local agencies to be part of a regional planning structure?

PRESENTLY?

NEAR FUTURE?

(a) How is the regional structure organized?

HOW MANY?

(b) How do these regional planning structures relate to other regional planning within the state?

COTERMINOUS REGIONS?

(c) Within the regional structure, how is planning for vocational education integrated into state and local human resources and manpower development efforts?

CETA LEGISLATION.

EXAMPLES.

(d) What is the role of the locals in regional planning for vocational education?

10. Do the established planning regions facilitate or inhibit vocational education planning?

(a) At the state level?

EXAMPLES.

(b) At the local level?

EXAMPLES.

11. What steps are taken to coordinate vocational and general education planning within the state?

HOW ARTICULATED.

FORMAL ARRANGEMENTS.

BARRIERS.

EXAMPLES.

12. Are you anticipating any new state legislation that will have an impact on vocational education in your state?

DESCRIBE.

IMPLICATIONS.

MANPOWER DATA

13. Would you briefly describe how your agency uses manpower data in:

(a) Resource allocations to vocational services and activities? (e.g., curriculum, professional development?)

SETTING
PRIORITIES?

DISADVANTAGED
AND
HANDICAPPED?

EXAMPLES.

(b) Justification of annual state budgets?

TO STATE
BOARD.

ADDITIONAL FUNDS
FROM LEGISLATURE.

EXAMPLES.

(c) Evaluation of local budgets.

HOW DONE?

EXAMPLES.

14. From which public, private, state or federal suppliers does your agency obtain manpower data?

ESC?

BLS?

INDUSTRY?

15. Is your state a participant in the OES Program? (Occupational Employment Statistics Program) If YES, ask:

(a) How long has it been a participant?

(b) What is the nature of the state's involvement in the program?

SPECIAL PROJECTS.

RESEARCH PROJECTS.

(c) What data have been produced?

GEOGRAPHIC COVERAGE.

OCCUPATIONAL SPECIFICITY.

OCCUPATIONAL COMPREHENSIVENESS.

CURRENCY OF DATA.

16. If your agency needs manpower data and cannot find what is needed in published sources, are there particular organizations or people that you call on for help?

FREQUENCY.

IMPORTANCE?

17. If you had to name one supplier of manpower data that is of the most value to your agency, what would it be?

18. Would you briefly describe the variety of ways in which your agency uses information provided by the Employment Security Commission?

BUDGET
JUSTIFICATION?

PROGRAM PLANNING?

STATE PLAN
PREPARATION?

NEW PROGRAM
STARTS?

EXAMPLES.

19. How does your agency use information provided by the Bureau of Labor Statistics?

BUDGET
JUSTIFICATION?

PROGRAM PLANNING?

STATE PLAN
PREPARATION?

EXAMPLES.

20. Here is a list of various kinds of manpower data. For each category of data, would you please indicate how important you feel it is in the planning of vocational education programs? (Present director with list of data categories.) (Mark 5 for the most important categories and 1 for the least important categories of data.)

21. (a) Would you say that your planning staff is ( ) very familiar, ( ) somewhat familiar, or ( ) not too familiar about what is currently available from ESC?

(b) From BLS? ( ) very familiar, ( ) somewhat familiar, or ( ) not too familiar?

22. Is there a formal structure that provides for a continuous working relationship with the Employment Security Commission? (If NO, what relationship does exist?)

DESCRIBE.

FREQUENCY OF INTERACTION.

EFFECTIVENESS.

TASKS PERFORMED.

EXAMPLES.

(a) Are there any obstacles or an organizational administrative or personal nature that preclude your agency from making increased use of manpower data available from the Employment Security Commission?

(b) Do you think you would get better data from ESC if you had an employee from your agency working in their office?

HOW BETTER?

23. Has your agency <u>initiated requests</u> during the past year for manpower data from the State ESC?

EXAMPLES.

(a) Were they able to supply it?

(b) Could you comment on the usefulness of the data?

24. Regardless of how frequently you use BLS or ESC manpower data, in general how would you rate the data as to its:

(a) Availability? (i.e., is it readily available upon request?)

(b) Currency? (i.e., is it recent enough?)

(c) Objectivity? (i.e., is it relatively free from judgmental bias?)

(d) Comprehensiveness? (i.e., is enough information provided?)

(e) Geographic Coverage? (i.e., is it at the appropriate geographic level?)

(f) Specificity? (i.e., are the reported categories precise enough?)

(g) Format? (i.e., is the tabular organization appropriate for your needs?)

Now we have a couple of questions to ask concerning the management of information in your agency, and that more or less wraps it up.

We have already requested the name of the person in your organization whose prime responsibility is with the agency MIS and we have some rather specific questions we would like to ask him at a later date. However, we would appreciate your general perceptions of some aspects of the MIS.

25. Would you give us a brief rundown of the organization of your agency information system? Do you have a chart of the organization?

26. What in general are your expectations of the MIS in terms of improving the delivery of vocational education in the state?

27. How do you evaluate its actual utility for vocational education in light of your expectations?

28. What are the three most important data items the MIS provides this agency for planning?

29. As you know, your state was selected as being exemplary for the availability and usage of manpower data. What do you feel are some of the more unique, innovative data use practices to be found in your state?

STATE LEVEL?

LOCAL LEVEL?

30. Finally, we would like to see, and perhaps in some cases have copies of:

(a) All of your manpower data reporting forms, both local and state.

(b) Guidelines or policy documents that deal with the usage of manpower data in your state.

(c) Written descriptions of your Management Information System.

(d) Any written documentation of the historical development of vocational education in your state.

(CONCLUDE INTERVIEW AND ASK FOR PERMISSION TO MOVE AROUND THE AGENCY AND TALK WITH OTHER PEOPLE. TRY TO GET STATE DIRECTOR TO CALL PLANNING DIRECTOR FOR APPOINTMENT.)

STATE DIRECTOR OF SECONDARY VOCATIONAL EDUCATION HANDOUT

Category of Data	Importance: Least Important				Most Important
A. State and area current employment by industry	1	2	3	4	5
B. State and area current employment by occupation	1	2	3	4	5
C. Occupation-Industry employment matrix	1	2	3	4	5
D. State and area estimates of total unemployment	1	2	3	4	5
E. State and area tabulations of unemployment by occupational categories	1	2	3	4	5
F. Projections of manpower demand (requirements) by occupation	1	2	3	4	5
G. Projections of manpower demand (requirements) by industry	1	2	3	4	5
H. Area Wage data	1	2	3	4	5
I. Indicators of labor supply by occupation	1	2	3	4	5
J. Labor turnover statistics	1	2	3	4	5
K. Labor force characteristics	1	2	3	4	5
L. Lists of job openings and their specifications	1	2	3	4	5
M. Lists of job openings that could not be filled locally	1	2	3	4	5
N. Manpower program enrollments, terminations and placements	1	2	3	4	5
O. Characteristics of "worker customarily hired" by occupation	1	2	3	4	5
P. Characteristics of "typical job" by occupation	1	2	3	4	5
Q. Indicators of general economic conditions	1	2	3	4	5

APPENDIX B

THE OCCUPATIONAL EMPLOYMENT STATISTICS PROGRAM

The OES program was initiated in 1971 to provide information on current and future occupational manpower requirements at the national, state, and local levels. The program consists of three related elements: (1) the OES Survey, (2) the National/State Industry-Occupation Matrix System, and (3) state and area occupational manpower projections.

The OES Survey

This program element involves the collection of current data on wage and salary employment by occupation from nonfarm establishments. These data are used to estimate total employment by occupation, by industry, for states and areas within states. The surveys are being conducted over a three-year period--manufacturing industries one year, nonmanufacturing (except trade) the second year, and trade the third. Employment data are being collected for more than 2,000 occupations ranging from professional occupations to occupations requiring only a short period of special training as well as many entry occupations. The survey is designed, when conducted for several time periods, to identify new and growing occupations and those decreasing in importance.

The National/State Industry-Occupation Matrix System

An industry-occupation matrix is a table that presents total occupational employment, cross-classified by industrial sectors, for a specific period in time and for a geographical area--the nation, a state, or a sub-state area. Thus far, 51 such matrices have been developed (covering each of the 50 states plus the District of Columbia) which are consistent in format, concept and data base with the national industry-occupation matrix. The present data base for the matrix system is a special tabulation of over 400 occupations, cross-classified by over 200 industries, obtained from the 1970 Census of Population. The data contained in the industry-occupation matrix system form the basis upon which projections of occupational manpower requirements can be developed for the nation and for states and sub-state areas. Work is presently underway to modify the current matrix system to permit the incorporation of more detailed occupational data obtained through the OES surveys. Even without the OES survey data, however, the matrix makes possible the translation of industry employment to occupational estimates for more than 400 occupations for states and sub-state areas.

State and Area Occupational Manpower Projections

The Bureau of Labor Statistics (BLS) is responsible for the development of the technical procedures used by the employment security agencies in making state and area projections of occupational manpower requirements. These procedures are described in the series of BLS publications entitled Tomorrow's Manpower Needs. First, the state agencies are responsible for preparing projections of industrial employment. Then, utilizing data contained in the industry-occupation matrices for the base year and the target year, occupational projections are developed by multiplying the occupational percentage distribution patterns for each industry by projections of total employment for that industry and summing the products for each occupation across all industries. A computerized system has been developed for the use of the employment security agencies in developing state and sub-state matrices, updating these matrices, and producing the state and sub-state occupational projections. Utilizing the procedures provided by BLS and the industry projections prepared by the state employment agencies, occupational manpower projections were prepared during 1974 covering all states, 84 major standard metropolitan statistical areas (SMSA's), and 34 special county groups. These projections covered more than 400 occupations for the periods 1975, 1976, and 1980 and were utilized by many of the state employment security agencies in preparing their annual report to state vocational education agencies.

APPENDIX C

INTERAGENCY AGREEMENT FOR THE DEVELOPMENT OF OCCUPATIONAL MANPOWER INFORMATION

The Vocational Education Act of 1963, as amended, Sections 103 and 123(a)(6)(A), calls for federal, State and local officials and advisory councils to use current and projected manpower employment information in evaluating, planning, and allocating resources for vocational education. The Comprehensive Employment and Training Act of 1973, Section 312(a), states

> "The Secretary of Labor shall develop a comprehensive system of labor market information on a national, State, local, or other appropriate basis, which shall be made publicly available in a timely fashion."

The purpose of this interagency agreement is to establish the national leadership essential to coordinate legislatively mandated activities related to occupational manpower information.

Specifically, the Manpower Administration and the Bureau of Labor Statistics of the U.S. Department of Labor and the Office of Education of the U.S. Department of Health, Education, and Welfare agree to (a) work toward the development of an occupational manpower information system that will satisfy the program needs of the three agencies, (b) coordinate research and related developmental activities in the area of occupational manpower information so as to avoid duplication of effort and maximize the effective use of available resources, (c) work

toward the development of improved information on current and projected manpower needs at the national, State, and local levels and, to the extent possible, establish standardized concepts, definitions, and methods as related to the collection of occupational data and the projection of occupational needs, (d) plan and develop a systematic approach for obtaining, assessing and delivering information on manpower demand and supply, and (e) raise the level of understanding of the specific occupational manpower data, information needs of data users and developers at the State and local level through coordinated action and communication.

To accomplish the purposes of this agreement, an Occupational Manpower Information Coordinating Committee shall be established. This Committee shall have three members, one appointed by each of three parties to this agreement. Its functions will be in the area of occupational manpower information and include, but not necessarily be limited to, the following:

1. Identify research and other program areas where coordination or other interagency cooperation will lead to improved efficiency and productivity, avoid duplication of work and/or improve program quality.
2. Recommend policy, program needs, and changes in administrative procedures to the three agencies that are party to this agreement that will enhance program effectiveness and efficiency.
3. Coordinate the conduct of Regional and when appropriate State and other jointly-sponsored workshops designed to improve communications among education administrators and planners.

employment security agency administrators and research personnel, manpower planning agencies and, representatives of the Manpower Administration, the Bureau of Labor Statistics, and the Office of Education. These workshops will be designed to identify the status, methods, and objectives of occupational statistics programs including the Department of Labor's Occupational Employment Statistics Program; the status and result of major research projects; the data needs of education and manpower planners; data limitations, and the availability of technical assistance and resources to meet manpower information objectives.

4. Develop and recommend to the signatory agencies of this agreement a consolidated program to be implemented at the State and local level pursuant to the statutory requirements of the Vocational Education Act of 1963, as amended, and the CETA legislation of 1973.

Ben Burdetsky
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Julius Shiskin
Commissioner
Bureau of Labor
Statistics, DOL

T. H. Bell
U.S. Commissioner
of Education, DHEW
AUG 22 1975